

THE BRITISH JOURNAL OF CHILDREN'S DISEASES.

FOUNDED BY GEORGE CARPENTER, M.D.

EDITED BY J. D. ROLLESTON, M.D.

CONTENTS

	PAGE
Symptoms and Signs of Chronic Heart Disease. By G. A. SUTHERLAND, M.D., F.R.C.P.	1
Some Cases of Incontinence of Urine. By A. RALPH THOMPSON, Ch.M., F.R.C.S.	10
Case of Erythroedema (the "Pink Disease"); and the Question of Acrodynia ("Epidemic Erythema"). By F. PARKES WEBER, M.A., M.D., F.R.C.P.	17
Dermato-polyneuritis (Acrodynia: Erythroedema). By HUGH THURSFIELD, M.D., F.R.C.P., in collaboration with D. H. PATERSON, M.B., M.R.C.P.	27
Acute Intestinal Obstruction due to Inspissated Meconium. By E. E. HUGHES, Ch.M. Manch., F.R.C.S. Eng.	32
Royal Society of Medicine	33
Société de Pédiatrie, Paris	38
Abstracts from Current Literature	43
Reviews	54

REPRESENTATIVES:

WALTER R. JORDAN, M.D. (Birmingham). ROBERT CRAIG DUN, C.M. (Liverpool).
 BERTRAM M. H. ROGERS, M.D. (Bristol). W. H. MAXWELL TELLING, M.D. (Leeds).
 ARTHUR J. CLEVELAND, M.D. (Norwich). D. WATSON GEDDIE, M.D. (Aberdeen).
 J. BOYD BARRETT, M.D. (Dublin). R. BARCLAY NESS, M.B. (Glasgow).
 C. CHRISTOPHER HEYWOOD, M.B. (Manchester).

APPOINTED BY THE MEDICAL STAFFS OF THE CHILDREN'S HOSPITALS.

E. P. BAUMANN, M.D. (Johannesburg).

PRINTED & PUBLISHED (QUARTERLY) BY ADLARD & SON & WEST NEWMAN, LTD.,
 BARTHOLOMEW CLOSE, LONDON, E.C. 1.

7s. 6d. NET.

PREPAID ANNUAL SUBSCRIPTION, 25s. POST FREE. (ALL RIGHTS RESERVED.)

SHIL
WITHDRAWN

TABLE OF CONTENTS

ORIGINAL ARTICLES.

	PAGE
1. Symptoms and Signs in Chronic Heart Disease. By G. A. SUTHERLAND, M.D., F.R.C.P.	1
2. Some Cases of Incontinence of Urine. By A. RALPH THOMPSON, Ch.M., F.R.C.S.	10
3. Case of Erythrœdema (the "Pink Disease"); and the Question of Acrodynia ("Epidemic Erythema"). By F. PARKES WEBER, M.A., M.D., F.R.C.P.	17
4. Dermato-polyneuritis (Acrodynia: Erythrœdema). By HUGH THURSFIELD, M.D., F.R.C.P., in collaboration with D. H. PATERSON, M.B., M.R.C.P.	27
5. Acute Intestinal Obstruction due to Inspissated Meconium. By E. E. HUGHES, Ch.M.Manch., F.R.C.S.Eng.	32

ROYAL SOCIETY OF MEDICINE 33

SOCIÉTÉ DE PÉDIATRIE, PARIS 38

ABSTRACTS FROM CURRENT LITERATURE.

Diseases of the Respiratory System.—Respiratory insufficiency in children.—Asthma in infants.—Bronchiectasis in the child.—Pleural disease in infants and children.—Acute pleuro-pulmonary congestions in children.—Empyema in children.—Method for diminishing mortality in empyema in infancy and childhood.—Influenza pneumonia complicated by empyema in an infant.—The mortality factors of lobar pneumonia in children.—Lobar pneumonia, with definite abdominal symptoms.—Basal pneumonic residues in children.—The diagnosis of pneumonia in children.—Radiological observations in acute respiratory affections in children, especially pneumonia.—Abscess of the lungs in infants and children.—A case of diaphragmatic hernia 43

Diseases of the Circulatory System.—Congenital heart-block.—Congenital aortic stenosis.—Diagnosis and prognosis of persistent ductus arteriosus.—Patent ductus arteriosus with involvement of the left heart.—Case of cyanosis with congenital stenosis of the pulmonary artery.—Cardiac developmental defect with return to normal.—Pathogeny of congenital heart disease.—The study of heart disease.—Auriculo-ventricular heart block in children.—Microsphygmia and mitral stenosis.—Blood-pressure observations in functional bruits in children and young adults.—Modifications of the blood-pressure from the effect of adrenalin in sick children.—Variations in the blood-pressure produced by injections of pituitrin in various infantile complaints.—Pericarditis in childhood 49

REVIEWS.

Précis d'Alimentation des Nourrissons.—Précis d'Alimentation des Jeunes Enfants.—A Synopsis of Medicine.—Lessons on Tuberculosis and Consumption.—A Text-Book of Gynæcology 54

The Practical Journal on Children's Diseases.

ARCHIVES OF PEDIATRICS

THE OLDEST JOURNAL IN ENGLISH AND THE REPRESENTATIVE ONE IN AMERICA
DEVOTED EXCLUSIVELY TO THE DISEASES OF INFANTS AND CHILDREN.

Published Monthly. Foreign Subscription, Yearly in Advance, \$5.50.

E. B. TREAT & CO., Publishers, 45 East 17th Street, NEW YORK, U.S.A.

English Agency: STANLEY PHILLIPS, 45, Brondesbury Road, LONDON.

THE
BRITISH JOURNAL
OF
CHILDREN'S DISEASES.

VOL. XIX.

JANUARY—MARCH, 1922,

Nos. 217-219.

Original Articles.

SYMPTOMS AND SIGNS IN CHRONIC HEART DISEASE.*

By G. A. SUTHERLAND, M.D., F.R.C.P.

In dealing with individual cases of heart disease it is advisable to have a definite line of procedure in our examination. History has shown that there are many pitfalls in connection with the diagnosis of heart disease both in early and adult life. Perhaps we shall be less liable to fall into them if a systematic examination into the signs and symptoms is made in every case. I suggest a definite line of procedure by asking you to ascertain the correct answers to the following questions.

(1) What are the symptoms complained of, and do they indicate heart disease?

(2) What are the objective signs on examination of the heart and circulation?

(3) Do the symptoms and physical signs correspond?

(4) If there are no cardiac symptoms what is the significance and importance of the physical signs?

(1) A child is frequently brought for medical examination because of suspected heart disease. If brought by the parents or friends it will usually be because of some symptom; if sent by a doctor it will usually be because of some physical sign. We have to bear clearly in mind what are the symptoms which are suggestive of heart disease and what are not. Amongst parents great stress is laid on such symptoms as fainting or faintness, a rapid change in facial

* A post-graduate lecture delivered at Paddington Green Children's Hospital.

colour—for example, sudden pallor or sudden flushing, or turning black in the face—and brief attacks of unconsciousness as in *petit mal*. Now fainting or faintness is not a common symptom in connection with heart disease in childhood, nor are sudden changes in the facial colour. When the subjects of these symptoms are children who are going about, it will be found in nine cases out of ten that the symptoms are indicative of vaso-motor instability and not of cardiac disease. So much is this the case that a history of such symptoms as the main complaint may be taken as *primâ facie* evidence that we are not dealing with a case of heart disease. Pain about the chest is another symptom frequently complained of, and viewed with alarm by the patient's friends. As a rule this symptom is not indicative of heart disease but of some entirely different source of disturbance. Pain may be induced by exertion or stress in cases of advanced heart disease, when other indications of cardiac failure will also be present, but it is not likely to occur until that stage has been reached. Pain about the chest in an otherwise healthy child may be dismissed as a symptom of heart disease.

On the other hand we have to inquire as to the presence of symptoms which may indicate heart disease. We are not now dealing with the case of children who are bedridden but with those who are going about. The chief symptoms which suggest heart trouble are shortness of breath on exertion, a disinclination to make those exertions which are a pleasure to healthy children, and a feeling of tiredness after moderate exertion. These symptoms may be the result of other conditions, but they are definitely consistent with heart disease as commonly found, and a physical examination will determine as to whether this is present. A preliminary inquiry as to a history of these symptoms and any others which may be elicited will help the examiner greatly in arriving at a correct diagnosis.

(2) A careful examination of the heart should be made for evidences of disease. Speaking generally it may be stated that the objective signs of disease predominate in childhood, while the symptoms predominate in adult and later life. The reason for this is that the early changes following rheumatic infection are not sufficiently severe or advanced to produce symptoms of cardiac weakness.

The changes in the heart to be looked for may be associated with congenital morbus cordis, or with acquired disease (chiefly rheumatic in origin) or with functional derangements. The changes met with may take the form of disturbances of rate or rhythm (irregularity), or of dilatation, or of hypertrophy, or of altered heart-sounds, or of murmurs.

(3) Having obtained a history of the symptoms, and having determined the physical changes in the heart, we have next to compare them and see whether they correspond. There must be a proper and precise evaluation of the cardiac signs and symptoms. This is clinical medicine, pure and simple. No laboratory tests, no instrumental aids can settle this question. A faulty diagnosis is often made if the examiner stops short without working out this problem. I am sometimes told that a boy has fainted at school and that there is an apical systolic murmur, and that the murmur explains the fainting. So far as I can follow the reasoning here, it is that the systolic murmur is evidence of heart disease, and that the boy had fainted because of the heart disease. In seeking for an explanation I should reverse the process and say that the fainting explains the murmur. We know the type of boy or girl who faints at school when standing up. The vaso-motor tone is low and the cardiac tonus is not fully developed. At times the cerebral circulation is not maintained at full pressure and the boy faints. At times also the ventricles do not contract and the valves do not close with their usual smartness and efficiency, and a slight reflux takes place through the mitral valve. Hence the systolic murmur. I say the fainting explains the murmur because both are due to the same cause, and that cause is not heart disease.

Whenever symptoms are present we must seek to establish a complete correspondence between the signs and symptoms. Prognosis, so far as concerns the limited number of cases in which a prognosis can be given during childhood, will be much aided by a satisfactory settlement of this question. A failure to determine the relationship between signs and symptoms will of necessity often lead to faulty treatment. We shall be led to treat the heart for symptoms which are not cardiac in origin, or to omit treatment of the heart for those that are.

(4) If no cardiac symptoms are present, what is the significance of any abnormal cardiac signs discovered on examination? As over a million children are having their hearts examined every year at the schools in this country this is a problem which presents itself very frequently. It is a problem which can be settled only by an examiner who is familiar with healthy as well as unhealthy hearts.

The first thing to be decided is as to whether the abnormal sign is really pathological or whether it comes within the range of the physiological. For example, some examiners will lay stress on dilatation of the heart if the apex-beat is felt half an inch to the

left of its normal position. They would regard as disease any change in the size or position of the heart, just as others have condemned as pathological any change in the size or position of the stomach or the colon. A child's heart will be found to vary much in size in conditions of health as well as in many conditions of ill-health, and in neither case is cardiac disease necessarily present. On the other hand if there is evidence of cardiac hypertrophy, that heaving action which can be recognised on palpation, we have a change present which is always pathological and never physiological.

Further, a condition of hypertrophy, whether it be localised to the left side, or the right side, or the base of the heart, is never primary. It will always be found to be the result of some definite lesion in the heart or about the heart, or of obstruction in the peripheral circulation. The detection of hypertrophy demands a further examination to find out the cause of the hypertrophy, and no diagnosis is complete until this has been discovered.

As regards that common cardiac sign, a systolic murmur at the apex, we have all as medical men suffered so much discredit in the past through this symptom and its interpretation that it would really be an advantage in the future to ignore it entirely. If other signs of cardiac disease are present we may consider along with them the presence of a systolic murmur about the præcordia, and determine as to whether it has an origin in a damaged valve. If, however, this murmur stands by itself as the solitary evidence of cardiac change, then I advise you to leave it severely alone.

There are many cardiac signs which we can estimate very lightly owing to their frequency and ascertained insignificance. Amongst them are the common irregularities of the heart in childhood, such as the sinus irregularity associated with respiration and an occasional extra-systole. There are few cardiac signs which of themselves are to be regarded as of serious import. There are, however, two which must be viewed as of very great importance. These are a persistently rapid cardiac rate (120 to 130) in association with other signs of heart disease, and an aortic diastolic murmur due to aortic regurgitation.

No cardiac lesion is to be assessed on the physical examination of the heart without an estimate being made as to the functional efficiency of the heart. For this reason one cannot make an estimate while a patient is confined to bed. Consider, however, the case we have been supposed to be dealing with, that of a child brought up for examination of the heart and free from a history of cardiac symptoms. A series of simple exercises such as walking,

running round the room, running up and down stairs, etc., is to be carried out, and the condition of the patient after each as to breathlessness, pulse-rate and exhaustion is to be carefully noted. We can thus determine what effect, if any, on the functional efficiency of the heart has accompanied the cardiac signs and lesions which have been found on examination. When this has been settled we are in a position to form a prognosis, and to decide as to whether any precautions or treatment may be necessary.

Let us try to apply these principles in the examination of some individual cases.

CASE 1.—This child is now 8 years old. Two years ago her mother noticed that on crying she held her breath and became black in the face. She had fainted, or felt faint, on two occasions, but had not lost consciousness and had recovered rapidly. She had seen a doctor, who, after examining the child carefully, said she had serious heart disease and must not be allowed to run or walk. The child was next taken to a neighbouring hospital, where the diagnosis of heart disease was confirmed, but the restrictions advised were not quite so rigid. In her search after the truth the mother next brought the child to this hospital. The little girl was of a bright disposition and rather nervous temperament. She was thin, of good colour, and did not suggest the appearance of *morbus cordis*. As regards symptoms, the mother had not observed anything of importance other than those mentioned above. The child had not suffered from any form of rheumatic infection.

On examination there was well-marked pulsation of the cardiac apex in the nipple line. Some might have called it dilatation and hypertrophy, but it was really a borderline case on which opinions might easily differ. Nothing else was made out indicating cardiac enlargement, but on auscultation at the base of the heart one heard a very loud double murmur running through systole and diastole, rather more marked in the former. If one were to estimate a cardiac lesion by the loudness of the murmur this would have ranked as a very serious one, for the noise produced was very great. The sounds of the heart were clear and normal, and, in fact, apart from this double murmur there was no abnormality about the heart. The situation of the murmur might have suggested a lesion of the aortic valves or pericardial friction, but the character of the murmur—sometimes described as “mill-wheel”—was entirely different. There was no doubt that we were dealing with a case of patent *ductus arteriosus*, the lesion having been persistent since birth.

So far we had not obtained any history of symptoms pointing to

cardiac disease, for the fainting turns and the blackness of the face on crying did not count for much. There was no real cyanosis of a persistent nature. The noisy patent ductus did not seem to have interfered with the child's growth and health. The child was then set to run round the out-patient room, which she did with thorough enjoyment as if it were a pleasure to be allowed to run once again. She passed successfully through all the tests, and we felt justified in telling the mother not to worry about the child's heart, but to let her go to school and lead the ordinary life of her schoolmates.

She has done this now for two years. During that time there has been no word of cardiac symptoms. On examining the heart to-day the only change I can note after two years is that the diastolic part of the rumbling murmur is not quite so loud as it was. Possibly the ductus may yet close and the murmur disappear entirely.

CASE 2.—This girl, aged 9 years, was sent into hospital because of her excessive adiposity and failing health. The deposit of adipose tissue throughout the body generally, and its accumulation in certain areas, was sufficiently striking to suggest a condition of pituitary disturbance—a view which was supported by a definite enlargement of the sella turcica as shown in a radiogram. Pituitary disturbance, however, would not account for some other conditions which were present.

There was very marked cyanosis of the face, giving the large features a bloated appearance. This cyanosis was not present in the fingers and there was no clubbing of the extremities. The temperature was subnormal, but the cardiac rate was persistently between 120 and 130 and the respirations 36 per minute. Even in bed the dyspnoea was evident, and she was unable to walk much owing to shortness of breath. The liver was considerably enlarged, extending some 3 in. below the costal margin in the mammillary line. The kidneys were not functioning well, the amount of urine secreted being about half the normal, and albumen was present. There were no tube-casts. The evidences of an impaired circulation were clear, but so far there was no explanation as to the cause.

Turn, now, to a fuller account of the patient's health before admission. Three years previously she had suffered from a severe attack of broncho-pneumonia associated with measles. From this time onwards she had put on weight rapidly, and had been subject to recurrent attacks of bronchitis and pneumonia. Owing to chest trouble she had not been able to attend school at all regularly. For some six weeks before admission the patient had suffered from increasing shortness of breath, and the face had taken on the dusky hue to which reference has been made.

It might be thought that an examination of the lungs and heart would easily and definitely settle the question as to the existence of any cardiac or pulmonary disease. Owing, however, to the extreme adiposity, it was difficult to determine the exact conditions in the thorax. As regards the heart the rate was rapid, the sounds were clear; at times there was a cantering rhythm owing to a reduplication of the first sound, and there were no murmurs. Marked epigastric pulsation and dulness on percussion to the right of the sternum suggested enlargement and hypertrophy of the right heart. The size of the heart, as shown in a radiogram, was increased, more especially on the right side. As regards the lungs, signs of chronic bronchial catarrh were always present, and the patient usually had a troublesome cough. Over the whole of the right lung the percussion note was impaired, and the breath-sounds were weak as compared with the left side.

So far we had not reached an explanation of the cyanosis and the signs of general circulatory failure, which was the important condition. An examination of the blood showed 6,800,000 red cells, hæmoglobin 120 per cent., and white cells 15,000. There were no changes indicative of a blood disease, and the spleen was not enlarged. While the cyanosis could be explained by the polycythæmia, or "erythrocytosis" as some would term it, there still remained to be settled the problem as to why there was such an increase in the red-cell count and the hæmoglobin.

I suggest to you that this patient has been suffering for some years from pulmonary fibrosis following broncho-pneumonia. As the result of the fibroid changes in the lung the pulmonary circulation has been interfered with; there has been a demand for more blood owing to deficient oxidation in the damaged lungs, and a compensatory erythrocytosis has followed. You will find the whole subject of compensatory polycythæmia discussed very fully in a recent book by Dr. Parkes Weber, from which I have learned much. The obstructed circulation in the lungs has not only led to the polycythæmia, it has also thrown extra work on the right side of the heart, which has become dilated and hypertrophied and is now failing. The left ventricle is failing also, for within the last few days œdema of the lower extremities has developed. So that the prognosis is not good. As regards treatment, it may be assumed that Nature has done her best in the way of increasing the number of red cells and producing compensatory hypertrophy of the heart. In both those functions it is extremely doubtful if we can do anything to improve on Nature's efforts. One factor in increasing the cardiac

weakness is the rapid rate of the heart, which prevents powerful ventricular contractions by cutting short the diastolic rest. We shall try digitalis here in full doses in order to obtain, if possible, a slower cardiac rate, and thereby more efficient ventricular contractions.

CASE 3.—A girl, aged $3\frac{1}{2}$ years, was admitted to hospital because of screaming fits at night. The history was that twelve months previously she commenced having these attacks at irregular intervals, but sometimes as frequently as five in one night. It was stated that she went stiff and grey, screamed, and complained of abdominal pain, was dazed but not unconscious, and was quite well as soon as the attack ceased. The duration of an attack varied from a few minutes to half an hour. On admission the child appeared to be well developed and healthy. On physical examination there was nothing specially abnormal. As regards the heart, it was noted that there was a soft systolic murmur over the præcordia and loudest at the apex, and that the second pulmonic sound was accentuated.

Three days after admission she had a mild attack during the night, the description of which rather confirmed the provisional diagnosis of *petit mal*. At the end of a fortnight the attacks became more frequent: during three nights she had eight attacks in all. The house-physician, Dr. Cameron Morris, who had been studying these attacks, informed me that they were more like cardiac disturbance than *petit mal*. He found that an attack began suddenly with pain in the abdomen of varying severity, but often leading to crying or screaming. She was pale about the face, but the lips were cyanosed, and she was cold all over. The pulse could not be felt at the wrist, and on auscultation the heart-rate was found to be from 160 to 180 per minute. The breathing was rapid, and the patient was always sitting up during an attack. At the end of from one to ten minutes the pain passed off, the pulse-rate dropped suddenly to 60 or 70, the respiratory trouble ceased, and the patient lay down and went to sleep.

As a rule during the day the child seemed very well and was in excellent spirits, although not inclined for much physical exertion. Occasionally an attack occurred during the day of the following nature: When up in the ward she asked to be carried after walking a few yards. A few minutes later when sitting in a chair she suddenly commenced crying, rested her head on the side of the chair and then collapsed on the floor. The face was pale and cold, the lips were blue, the pulse 160, and the patient was rather dazed. She cried a little but said she had no pain, and in a couple

of minutes she was better, the heart-rate slowing down to 60. She remained pale and quieter than usual for half an hour and then was quite herself again.

Thus far the nature of these attacks certainly pointed to some cardiac disturbance, and accordingly the heart was examined more carefully than at the routine examination. The lower part of the heart and apical region appeared to be normal as regards the size and sounds and pulsation. Over the upper part of the heart, extending from the level of the nipple to the upper border of the second rib, there was an area of strong heaving pulsation, suggestive of hypertrophied action or the dilatation of some large blood-vessel. Percussion showed that the note over this area was dull, and that in fact the normal area of cardiac dulness at the base was considerably extended both upwards and outwards to the left. At times there was a definite systolic thrill and murmur in the pulmonary area, and the second sound there was always accentuated. A skiagram showed some enlargement of the right side of the heart and also an extension upwards of the basal region of the heart or the aortic arch. The cardiac rate, apart from the changes noted during the screaming attacks, was normal and the action regular. There was no evidence of any valvular disease. The respiration was easy and natural, at a rate usually of 24 to the minute. A blood-count showed that the red cells numbered 7,250,000.

There is no doubt that a serious cardiac lesion is present, because an area of heaving pulsation at the base of the heart of this nature is almost always due to aneurysm. The exact site of the aneurysm cannot be definitely stated, but in all probability it is either in the pulmonary artery or the ductus arteriosus, and is congenital in origin, the result of some maldevelopment. Will a cardiac lesion of this nature serve to explain the attacks of pain, dyspnoea, cyanosis and tachycardia from which this child suffered? Can we make the symptoms complained of and the physical changes in the heart fit in with each other? An aneurysm produces symptoms by pressure and also by throwing extra work on the heart, and the conditions vary considerably from time to time. This child has periods of good health and then a series of these attacks—a state of affairs quite compatible with an aneurysm. The symptoms during an attack, taken individually or collectively, can be explained as the result of distress and disturbance in the heart, whose normal action is interfered with by the aneurysm of a basal blood-vessel. In the absence of any other evidence of disease we are content at present

to regard the symptoms and cardiac signs in this case as being distinctly correlated. As regards the prognosis, it must be kept in mind that some of these attacks are very severe, and all of them are very alarming. She has been in other hospitals, and was promptly put on the "danger list" after the first attack. At present the danger seems to lie more in the growth of the aneurysm than in death during one of these attacks, which have been numerous during a period of twelve months. If the aneurysm increases in size the prognosis becomes steadily worse. On the other hand, if it remains stationary or diminishes in size, its presence is by no means incompatible with her growth into adult life. There is no specific treatment here as there is no evidence of syphilis. Her life will be carefully regulated, without excessive precautions and without allowing any wild exertions or excitements.

These three cases, of a rather unusual nature, have served to illustrate the principles which were laid down at the beginning. You will see later that these principles are equally applicable in the more common forms of heart disease associated with rheumatic infection.

SOME CASES OF INCONTINENCE OF URINE.

By A. RALPH THOMPSON, Ch.M., F.R.C.S.,

*Surgeon in Charge of Genito-Urinary Department, Guy's Hospital, London;
Examiner in Anatomy for the Primary Fellowship Examination,
Royal College of Surgeons; Formerly Surgeon to the Victoria
Hospital for Children, London.*

It may be worth while to put on record some cases of incontinence of urine, in which a method of treatment not indeed new, but, at the same time, perhaps not known as it should be, has been used. No excuse for describing in detail the treatment of such conditions is necessary; so long as the condition known as incontinence is a common one, any additional treatment for this distressing complaint which offers a chance of cure is worthy of some attention.

When a young patient who attends in my department at Guy's Hospital, and who is stated to be suffering from incontinence of urine, is examined, the first care is to exclude gross surgical conditions, such as stone—it may be in the bladder, it may be impacted in the urethra—or tuberculosis of the urinary tract. The second care is to exclude definite nervous lesions, such as may be associated with spina bifida. The third care is to exclude paralytic

distension of the bladder, which is associated with muscular failure of the bladder and overflow of urine. Finally in female children we must be careful to exclude vesico-vaginal fistula, which may be formed quite quietly, and quickly, owing to some unsuspected condition.

In cases which show none of the surgical conditions already indicated the knee-jerks should be always carefully examined. They are usually, and manifestly, increased in association with incontinence of urine. The blood-pressure may also be raised and should be always investigated. These two clinical signs are most useful, as affording some extra knowledge of the lesion known as incontinence of urine. This is a very necessary factor in inspiring confidence in the patient and friends. After a diagnosis of incontinence of urine has been made, and inquiries and notes made as to its frequency by day and night, belladonna and thyroid treatment is prescribed—either separately or together; but usually one drug, and that belladonna, is prescribed first. The initial doses are two minims of the tincture of belladonna, and one quarter of a grain of thyroid extract. The bowels are attended to; but above all, the child himself, if he is old enough, and the relations are told exactly what has been found out, and every effort is made, as has been just indicated, to inspire the confidence of the patient and his friends.

If at the end of a fortnight there is no improvement in the condition of urinary incontinence I still persist in the drugs, but I at once resort to training the bladder muscle.

The treatment was first suggested to me by my friend Dr. R. C. Mullins, of Grahamstown, S.A., and consists in passing a moderate-sized catheter, with the necessary precautions, and funnelling fluid in, at first under a pressure of 75 cm., and if necessary, later, under a pressure of 150 cm. The quantity injected varies of course with the age and size of the patient. Distending the bladder is a process not to be encouraged—in fact to be severely condemned—in most vesical conditions, but in these cases efforts should be made to put into the bladders of children under 4 years of age 6 oz., under 8, 8 oz., and under 16, 12 oz. or even more; the aim should be to get a reasonable minimum in. If we take 6 oz. as a reasonable minimum which the patient can hold, the fluid should be passed after removal of the catheter and collected, and the quantity should be demonstrated to the patient and relations. This is important as showing the quantity which can be retained by the patient. At the next sitting a larger quantity is introduced by the same method. The next sitting should not take place within three days of the

previous one. In older patients, such as boys at public schools, there is an additional step in treatment which may be undertaken, namely, to instruct the patient during the act of micturition to stop micturating two or three times. This puts the "compressor urethræ," wherever that muscle may be really situated, into action, as well as other muscles which control micturition. The treatment aims at dilating the bladder muscle, and training the micturition-controlling muscles to work more efficiently.

So far as I am aware I have not had a failure with this method of treatment. With an individual competent to pass a catheter no patient, as yet, has offered the slightest objection to the use of this instrument, nor have the relations done so.

The following four cases are given as illustrating the method of treatment and its results.

CASES OF INCONTINENCE OF URINE—ENURESIS.

CASE 1.—L. S—, male, aged 6 years. Attended the Genito-Urinary Out-Patient Department at Guy's Hospital on January the 7th, 1921. He had been attending another department since November the 26th, 1920.

The incontinence during the day had apparently improved with belladonna and thyroid extract, but still continued at night. Patient wets his bed every night.

On January the 7th boracic lotion was funnelled into the bladder through a catheter, and patient after removal of the catheter passed, and, therefore, had held, at least 4 oz. of fluid. Belladonna was continued, but thyroid extract discontinued.

On January the 14th 4 oz. drawn off from bladder by catheter; 6 oz. inserted, which the patient held for 8 minutes.

Belladonna continued.

On January the 21st 7 oz. inserted and retained. Patient wet his bed only three times during the week.

On February the 4th 7 oz. put in, but not retained. Patient complained of "pain" when 6 oz. had been funnelled into bladder. He had not wet his bed, and had been in Lancashire for a change of air for two weeks.

Belladonna discontinued, and malt and iron given. Patient continued to improve, and was discharged in an apparently normal condition on April the 29th, 1921.

CASE 2.—M. D—, female, aged 9 years. There had been nocturnal incontinence since babyhood. There had, been, however,

control of micturition during the daytime, "even when the patient was excited." The vulva is slightly excoriated.

Patient attended the Genito-Urinary Department at Guy's Hospital, January the 21st, 1921. Belladonna was administered.

On January the 28th condition of nocturnal enuresis remained unchanged. The urine, as tested, was alkaline, but contains no albumen nor excess of phosphates. Eight oz. of boracic lotion were funnelled into the bladder, and retained easily for 5 minutes. Belladonna was omitted, and Easton's syrup substituted.

On February the 4th 9 oz. retained in bladder for 25 minutes after funnelling in boracic fluid. Easton's syrup continued.

On February the 11th thyroid extract gr. $\frac{1}{4}$ commenced morning and evening, and Easton's syrup continued. The bladder continued to be irrigated. The patient improved, and was discharged on July the 12th, 1921, apparently cured.

In this case I am inclined to think that the effects of irrigation of the bladder were not so marked as in the previous case, and that the cure was perhaps due to the thyroid extract.

CASE 3.—L. R—, female, aged $7\frac{4}{12}$ years. During the six months previous to her admission as an out-patient to Guy's Hospital on February the 4th, 1921, the patient had had incontinence of urine day and night. She was a nervous child, and suffered from dreams at night. Previously, according to the mother, she had been perfectly normal. Rectal examination, bimanual examination and X-ray examination negatived the presence of calculus in the urinary tract. She was given calomel $\frac{1}{2}$ gr. every night for a week.

On February the 11th, thorough general examination revealed enlarged mediastinal glands at the root of the right lung. The right kidney was just palpable (as I should expect it to be at this age), but it was not tender. Thyroid extract $\frac{1}{4}$ gr. morning and evening was ordered and administered.

On February the 18th patient suffered less from incontinence during the day, but she still suffered from it at night. The thyroid extract was increased to $\frac{1}{2}$ gr. night and morning.

On February the 25th tinct. belladonnæ *mij ter die* was given in addition to the thyroid extract.

On March the 4th patient was not much better. Eight oz. of boracic fluid were injected in the bladder, and afterwards passed by the patient. The belladonna and thyroid extract were continued.

On March the 11th, in addition to the belladonna and thyroid extract, malt and iron were given. One oz. of urine was removed

from the bladder and 8 oz. returned after injection. Seven oz. only were passed, after retention of fluid for 5 minutes. This suggested that the bladder was incapable of passing the whole of the fluid in the bladder.

On March the 18th there was a little improvement in the incontinence; 2 oz. of urine removed through catheter.

On April the 1st the drug treatment was continued as before. Blood-pressure 120 mm. Two oz. of urine removed by catheter. Eight oz. of boracic fluid inserted into bladder, and 6 oz. passed after retaining fluid for 5 minutes.

On April the 8th there had not been any incontinence since last attendance. Ten oz. were inserted, and retained for 5 minutes. Thyroid treatment omitted. Blood-pressure was still 120 mm. The improvement continued. Patient was treated only with extract of malt and iron. On January the 20th, 1922, the patient reported that she had entirely lost the incontinence.

CASE 4.—X. Y. Z—, aged 17 years, a public school boy, who suffered from incontinence and whose career for the army had been stopped, and whose house master had refused to take him any longer on account of his trouble, reported to me on April the 8th, 1921. He wet his bed constantly, but apparently had fair control during the day. I injected into his bladder through a catheter a quantity of plain boiled water, at a pressure of 75 cm., and at a temperature of 100° F. He passed 700 c.c. of watery fluid. On April the 11th I injected fluid at the same pressure, and at a temperature of 112° F.: he passed 800 c.c. On April the 14th weak oxycyanide of mercury solution was injected at a temperature of 112–114° F.: he passed 800 c.c. So far, although staying temporarily at a house in London he has not wet his bed and has slept comfortably, but on April the 17th he wet his bed. On April the 18th he passed 800 c.c., which had been injected at a temperature about 98·4° F. On April the 20th he passed a little urine in his bed. I noticed that after the patient had made an effort to hold the fluid which was injected next day, at a height of 150 cm., a few drops were passed involuntarily, at the end of micturition. he passed 830 c.c. On April the 21st I ordered liquor strychninæ mij; tinct. digitalis mij, *t.d.s. a.c.*

Next night the patient passed some water in his bed. On April the 23rd I injected 830 c.c., which he completely retained for two or three minutes.

On April the 26th, the patient meanwhile not having wet his bed, I injected 850 c.c., and during evacuation of the bladder he was

instructed to stop passing the fluid twice. His holidays were now drawing to a close, and I could not treat him any longer. He had no more incontinence for one week, and went back to school. He passed water in his bed once or twice at the beginning of term, but has had no further incontinence, and reported later in the year that he was quite well. He had been made a prefect, and had got into the school "22."

I venture to think that these histories show the value of injection of fluid into the bladder in increasing quantities in cases of incontinence. Undoubtedly belladonna and thyroid extract are useful drugs for the condition, but I cannot withhold the opinion that irrigation is also likely to be most useful. Important assistance is to be found by getting the patient to hold the fluid injected for some time, but one should never wait long enough for the patient to pass it more or less involuntarily. Probably also instructing the patient to stop in the act of micturition once or twice is of great value.

I think, too, that this irrigation treatment is of importance as a test of gross surgical disease, and the next case, which to me at any rate was most instructive, may be recorded.

A boy, T. F—, aged 12 years, was admitted to Guy's Hospital on November the 3rd, 1920. He had incontinence, which appeared to be of the enuresis type, except that his bladder would not hold more than 30 c.c. of fluid. The urine was quite clear. I showed him at a clinical meeting of the Urological Section of the Royal Society of Medicine, as I was doubtful about the case being one of the usual type of incontinence. No other symptoms developed until the beginning of December, when the boy developed pain over the left renal area. No swelling was palpable. Cystoscopy was impossible. The boy rapidly went down hill, and died on December the 28th, 1920.

At the autopsy the left kidney was found to be the seat of tuberculous pyonephrosis, with complete disorganisation of the organ. The right kidney was found to be the seat of ascending nephritis, probably tuberculous.

The fact that during life the boy could not hold more than 30 c.c. of fluid when injected into the bladder should have at once warned me of a possible serious cause of the trouble; and I regret that I did not realise that the case was probably tuberculous until too late for adequate interference.

The last case, which was full of interest, shows how necessary a thorough examination is in cases of incontinence.

A girl, aged 12 years, was admitted to Guy's Hospital with a diagnosis of incontinence. There was a long history of the trouble—something like five years or even more. I assumed at first that the condition was one of the usual type, but an X-ray photograph revealed the fact that in the bladder was a stone, which had formed round a bone collar-stud, such as is used for fastening the front of a man's collar. Examination under an anæsthetic revealed the fact that there was a vesico-vaginal fistula, through which all the urine came. The hymen was of course open, and dilatable to the size of an average little finger. Mr. V. E. Lloyd, my chief clinical assistant, aided by Mr. C. H. Medlock, very kindly repaired and closed the fistula six weeks after I had removed the stone through a suprapubic wound. The patient in their hands did remarkably well, and has had no more trouble. As to how the collar-stud got into the bladder must remain a mystery. Personally I should be in favour of a vaginal route. The urethral route, I should have thought, is out of the question. There remains the possibility of an alimentary route. Such an article might have been swallowed easily, and passed, either through the walls of the small intestine or of the cæcum—more probably the latter—into the bladder, with the later formation of a vesico-vaginal fistula from the bladder side of the septum which separate the two cavities.

SUMMARY.

(1) Incontinence of urine, being a common and distressing complaint, merits the trial of any treatment which bears the test of practice.

(2) Four successful cases of injecting increasing amounts of fluid into the bladder are recorded.

(3) In cases of incontinence particular care should be taken to exclude tuberculous disease of the urinary tract (one case recorded) and also vesico-vaginal fistula (one case recorded).

(4) The knee-jerks are frequently increased in cases showing incontinence of urine. The blood-pressure may also be increased.

(5) A knowledge of these facts, and their elucidation, add to the necessary confidence of the patient and his relations in the medical man attending the case.

CASE OF ERYTHREDEMA (THE "PINK DISEASE"); AND
THE QUESTION OF ACRODYNIA ("EPIDEMIC ERYTHEMA").

By F. PARKES WEBER, M.A., M.D., F.R.C.P.

THE patient, a boy, was aged $2\frac{1}{2}$ years when I demonstrated the case* at the Dermatological Section of the Royal Society of Medicine



FIG. 1.

* Under the heading "A Condition Somewhat Resembling Lupus Pernio in a Child."
VOL. XIX.



FIG. 2.

on April the 21st, 1921, and at the Section for the Study of Disease in Children on April the 22nd, 1921. My full account, with three illustrations, was published in the 'British Journal of Dermatology and Syphilis' for June, 1921 (vol. xxxiii, pp. 228-233). At that time the condition, in regard to the hands and feet, might almost have been termed "*acrodermatitis chronica mutilans*." There was extreme redness of the cheeks and chin (Fig. 1), and the skin of the cheeks was slightly scaly. There was a chronic offensive muco-purulent discharge from the nose, the bridge of which was very depressed. The skin of the hands (Fig. 2) tended usually to be swollen and red or cyanotic. The tips of some of the fingers had been lost by gangrene or ulceration. The feet (Fig. 3), like the hands, tended to be turgid and red or livid, and in each sole there was an irregularly shaped chronic ulcer. Fever was occasionally present, probably in connection with the septic nasal trouble. A blood-count showed nothing special; nor did the microscopical examination of a small piece removed from the edge of the ulcer on one foot. In the bones of the hands there were small areas of imperfect calcification or of decalcification, according to the results of Röntgen-ray examination. The blood-serum of the patient and his mother had previously been found to give a negative Wassermann reaction on two occasions.

For the earlier history of the case I was indebted to Dr. E. A. Cockayne, who had shown the case in January, 1920, at the Section for the Study of Disease in Children, Royal Society of Medicine. The symptoms in the left hand apparently commenced at three weeks of age. The offensive nasal discharge was noticed at the age of ten weeks. The child was breast-fed for the first seven weeks of life, and then brought up on various milk foods. A thorough trial of mercurial treatment had been made by Dr. Cockayne, but with no obvious benefit.

Subsequently attention was specially directed to the nose. Mr. G. J. Jenkins, on May the 7th, 1921, kindly examined the patient under chloroform anæsthesia, and reported that the septum nasi had almost entirely disappeared and that the turbinated bones had also largely disappeared. He could detect no bone-sequestrum. The accessory nasal sinuses were apparently not involved. Mr. Jenkins thought that the nasal disease was probably syphilitic. However, some cerebro-spinal fluid (obtained by lumbar puncture on April the 25th, 1921) gave a negative Wassermann reaction; and later on the idea of trying neosalvarsan treatment was finally abandoned, it having been found that the blood-serum gave a negative Wassermann reaction in the patient's father and mother, as well as in the patient himself.

A diphtheroid bacillus was cultivated (Lister Institute, through the kindness of Dr. J. C. G. Ledingham) from the nasal discharge and likewise from the surface of the ulcer on one of the feet, but no true diphtheria bacilli were found. Two guinea-pigs inoculated



FIG. 3.

with the diphtheroid bacillus grown from the patient's nose remained perfectly well up to eight days after inoculation.

Pirquet's cuti-reaction for tuberculosis was tried, with a negative result. At the end of July, 1921, temporary slight hæmaturia was observed.

Small doses of aspirin seemed to give some relief when the patient

was restless or crying, from pain or cutaneous irritation. A white precipitate ointment (5 per cent.) was used for the hands and feet, apparently with some benefit. Painting the nasal passages once daily with perchloride of mercury solution (1 in 1000) was likewise tried.

On October the 24th, 1921, on leaving the hospital, he weighed only 1 st. 5 lbs. 12 oz.—nearly the same as on March the 14th, 1921. There was still a chronic ulcer on the sole of the right foot, but that on the left foot had healed. The condition of the nose remained about the same. The fingers presented a somewhat more mutilated appearance than on admission.

Soon afterwards, owing to family difficulties, the child had to be sent to an infirmary hospital, where he died on January the 11th, 1922. Unfortunately no post-mortem examination was made.

I should add that, though the patient could never walk and could never use his hands properly whilst under my observation, there was no sign of definite motor paralysis. The ulceration on his feet and the mutilated and ulcerated condition of his hands would anyhow have greatly hindered the use of his upper and lower extremities.

DIAGNOSIS.

The diagnosis either of *Lupus erythematosus* or of *Lupus pernio* could not be pressed, especially as the patient was so young. Leprosy, beri-beri and pellagra were out of the question. There was no evidence of chronic arsenical poisoning. On the contrary the patient's general condition seemed slightly to improve whilst under small doses of arsenic in the hospital. Cases of so-called acrocyanosis are not accompanied by the excessive itching or pain noted in this child. Though the sclerodactylia type of sclerodermia sometimes commences with attacks resembling Raynaud's syndrome in the fingers (as I have pointed out in regard to the diagnosis of certain other cases), no sclerodermatous changes developed in this case, and the chronic condition of the extremities did not resemble any variety of Raynaud's syndrome.

Erythromelalgia is a syndrome or symptom-complex, which may be due to various causes. It is characterised by pain and turgid redness or cyanosis in an extremity, nearly always a foot, especially when it is allowed to hang down or rest in a dependent position. I do not know what was the exact nature of the cases, in the description of which Weir Mitchell first coined the term, but it is perhaps best seen in cases of thrombo-angiitis obliterans,* when middle-sized

* F. Parkes Weber, "Thrombo-angiitis Obliterans (Non-syphilitic Arteritis Obliterans of Hebrews)," 'Quart. Journ. Med.,' Oxford, 1916, ix, pp. 283-300.

arteries of the affected leg have become occluded. It is likewise occasionally seen in tertiary syphilitic subjects when the same arteries are blocked. In the present case there was of course no arterial obstruction of the kind, and syphilis could be absolutely excluded. The term "erythromelalgia" has likewise been applied to redness and pain in the extremities in certain neuritic cases, for instance, during the epidemic of arsenic poisoning amongst beer-drinkers in England, 1900-1901. In the present case there was no suspicion of any possible arsenic poisoning.

When I showed the case in April, 1921, at the Dermatological Section of the Royal Society of Medicine, Dr. J. H. Sequeira suggested that it might be an exaggerated example of the condition in very young children which had in Australia been described as *erythrœdema* by Dr. H. Swift (of Adelaide) and Dr. A. J. Wood (of Melbourne), as the "pink disease" by Dr. C. P. B. Clubbe (of Sydney), and as "raw-beef hands and feet" by Dr. W. Snowball (of Melbourne). I am now convinced that this was the correct diagnosis, whatever the true ætiology of the cases in question may be. The term "erythrœdema" is admitted to be rather unfortunate, because although the hands and feet appear swollen there is no true œdema. Indeed, in an annotation in the 'Lancet' (London, 1918, i, p. 849), this question of œdema led to the confusion of erythrœdema with cases of "general œdema following gastro-enteritis in children." Nevertheless the name "erythrœdema" should be retained until more information as to the nature and ætiology of the condition in question is forthcoming. (It should be remembered that doctors retain the name "myxœdema" for a disease in which there is generally no true œdema.)

I have obtained information from the article on "Erythrœdema" by A. J. Wood in the 'Medical Journal of Australia' for February the 19th, 1921 (i, p. 145), and from the leading article on the subject in the same number of the Journal (p. 155).* The term "erythrœdema" was first employed in February, 1914, by Dr. H. Swift, in a paper read before the Section of Diseases in Children at the Tenth Australasian Medical Congress, for a syndrome in very young children characterised by extreme fretfulness, neuro-muscular disturbance, sleeplessness, and a red rash involving the hands and feet and at times other parts of the body. This syndrome had already been observed by Dr. Swift and some other Australian physicians, but had not previously been described. Dr. Snowball had spoken of the children "with raw-beef hands and feet," and Dr. Clubbe and others

* See also 'Lancet,' London, 1918, i, pp. 611, 684, 849; and 1921, i, p. 871.

had usually referred to it as *the pink disease*. Dr. A. J. Wood collected notes of 40 cases and Dr. F. H. Cole contributed records of 51 cases. According to Wood "the child is carried into the surgery with the head bent down generally into its mother's chest, or frowning with half-closed eyes, as though it dreaded the light, and refusing to look up. . . . Some patients do not seem able to rest, scratching at their feet or pulling at their hair (trichotillomania) or ears, frequently making them bleed. . . . In some cases the red, swollen appearance of the hands is an early symptom, and, if present, is absolutely pathognomonic." The children are worn out by want of sleep and the intolerable irritation of the skin of the body, hands and feet. They sometimes become very vicious, scratching and biting at their mothers' faces. After a week or two the skin may begin to act freely, and a profuse, extremely irritable miliarial sweat-rash appears over the front and back of the trunk. It is this pink sweat-rash which led to the affection having been termed "the pink disease" by Clubbe and others. Somewhat later, from two weeks to five months after the onset of the fretfulness, the redness of the hands and feet appears. Wasting is an early symptom and the muscles become soft and weak; "the neck muscles do not appear able to support the head properly, and in older children the power of sitting up or walking is lost early in the disease." Stomatitis is frequently present, and the teeth in severe cases may become loose and even fall out. Photophobia occurs in many cases; it may pass off and return several times. Marked ulceration of the skin may occur from scratching or rubbing. In one case contraction occurred by the healing of a deep ulcer on the palmar surface of two fingers. "The loss of finger-nails and toe-nails is by no means rare; one patient shed his toe-nails five or six times in the course of his thirteen months' illness." Constipation is more frequent than diarrhoea.

Of the 88 cases collected by Dr. A. J. Wood and Dr. F. H. Cole 52 were males and 36 were females. The ages of the patients varied from 4 months to 3½ years, but in 57 cases the patients were between the ages of 9 and 18 months. Death occurred in 5 out of 91 cases, in one case from sudden heart failure, in the other four cases from broncho-pneumonia. Post-mortem findings did not throw much light on the nature and causation of the erythrœdema.

There can be no doubt that the cases in young children in America, described during 1920 and 1921 as *acrodynia* or pellagra, or as resembling *acrodynia* or pellagra, by W. Weston,* A. H.

* W. Weston, "Acrodynia," 'Arch. of Pediatrics,' New York, 1920, xxxvii, pp. 513-522.

Byfield,* H. C. Cartin,† P. W. Emerson,‡ J. Zahorsky,§ and probably by others, are of the same nature as the Australian "erythrœdema" cases. Dr. Weston's paper was based on 8 cases in the practice of Dr. W. F. Patrick. Dr. Byfield's paper was based on 17 cases. All of his patients were under 4 years of age, five of them being under one year. Some of the cases were mild, but others ended in death. In one fatal case, complicated with tuberculosis, a post-mortem examination showed "involvement of an occasional anterior horn-cell of the spinal cord, gliosis about the central canal, and œdema of the sensory roots." These findings however, can hardly be accepted without confirmation as representative of the disease. Byfield points out that the disease is differentiated from pellagra by lack of sharp demarcation in the skin lesions, by the uniformly early age of the patients, etc.|| He agrees that his cases somewhat resemble the descriptions of acrodynia. He might have added that the uniformly early age of his patients was likewise against the diagnosis of acrodynia. He suggests that the disease with which he is dealing is a post-influenzal radiculitis or sensory polyneuritis; but surely the connection of these cases with influenza cannot as yet be established.¶

In Byfield's cases "a symmetrical involvement of the fingers and toes, recurring at intervals of a fortnight or so, or even tending to be more or less constant, was one of the most striking characteristics of the trouble. . . . Confluent erythema was the rule on the distal phalanges. Desquamation, most marked at the tips of the fingers and toes, growing less toward the region of the wrists and ankles, was often present. The feet were only slightly less involved than the hands. . . . In two of the cases the cheeks and the tip of the nose were involved." Byfield remarks that involvement of the genito-urinary tract was manifested by the frequent presence of pyelitis, though this was never extreme and usually yielded to treatment. Acetonuria, probably connected with the under-nutrition and anorexia, was not rare. *The Wassermann reaction was always negative.*

Byfield's case 8 is the one that most nearly resembled my case. The patient was a boy, aged 10 months, who was admitted to hospital

* A. H. Byfield, "A Polyneuritic Syndrome resembling Pellagra-Acrodynia seen in Very Young Children," 'Amer. Journ. of Diseases of Children,' 1920, xx, pp. 347-365.

† H. C. Cartin, 'Pennsylvania Med. Journ.,' 1921, xxiv, p. 287.

‡ P. W. Emerson, 'Journ. Amer. Med. Assoc.,' 1921, lxxvii, p. 285.

§ J. Zahorsky, "Pellagra or Acrodynia in Children," 'Journ. Missouri Med. Assoc.,' 1921, xviii, p. 153.

|| In genuine cases of pellagra the flexor surfaces of the hands and feet are not so much affected as the extensor surfaces.

¶ In regard to the suggested relation of "acrodynia" to epidemics of influenza, compare F. G. Crookshank, 'Medical Press,' London, 1920, clxi, pp. 495-496.

after four months' illness. The nose and cheeks showed large red patches—much as in my case—according to the coloured plate illustrating Byfield's description. The hands and feet were red and cold. The tendon reflexes were present. As in my case, there was a decided nasal complication present. Diphtheroid bacilli were detected, but no circulating diphtheria toxin was found in the blood. After six weeks of observation and dietary treatment (no gavage) the tonsils and adenoids were removed, and the nasal sinuses, which were found to contain pus, were drained. A rapid cure was not achieved, but the improvement following the operation as far as the paræsthesia and skin eruption were concerned seemed more distinct than that corresponding to the dietetic treatment. Finally the child recovered completely.

My case was a much more severe one than Byfield's. The disease apparently commenced in the first month of life, and lasted till the patient's death at $3\frac{1}{4}$ years of age. The cheeks, chin, nose and ears (pinnae) were affected (see Fig. 1) as well as the hands and feet. The soles of the feet were red, slightly desquamating, and deeply ulcerated (see Fig. 3). The hands were mutilated by the loss not only of nails, but of portions of fingers also (see Fig. 2).

Incidentally, I should mention here that I am indebted to my friends Dr. Hugh Thursfield and Dr. D. H. Paterson for demonstrating to me (March the 11th, 1922) a little girl, aged 1 year, in the Great Ormond Street Children's Hospital (London), with symptoms almost exactly corresponding to (and possibly more striking than) those in Dr. Byfield's case 8. [See following paper in this issue by Dr. Thursfield, p. 27.—ED.]

I cannot conclude without a short reference to *acrodynia*, a term which has been much used in the recent description of erythroedema cases by American authors. *Acrodynia* (which means "pain in the extremities") was the name first given by Chardon (1830)* to the remarkable epidemic disease, which, commencing during the winter of 1827–1828 at Paris, had by the end of summer, 1828, attacked about 40,000 persons.† During the following autumn and winter the cases

* Chardon fils, "De l'acrodynie, ou épidémie qui a régné à Paris et dans les environs depuis l'année 1828," 'Revue Médicale franç. et étrang.,' Paris, 1830, iii, pp. 51, 374.

† For general accounts of *acrodynia* cf. 'Dictionnaire Encyclop. des Sciences Médicales,' Paris, 1869, first series, vol. i, pp. 654–664; August Hirsch's 'Handbook of Geographical and Historical Pathology,' English translation, New Sydenham Society, 1885, vol. ii, pp. 248–252; Radcliffe Crocker's 'Diseases of the Skin,' London, third edition, 1903, vol. i, p. 117. There are also accounts in Quain's 'Dictionary,' Fagge's 'Medicine,' etc. A most excellent contemporary account is that by Genest, "Recherches sur l'affection épidémique qui régné maintenant à Paris," 'Arch. Gén. de Méd.,' Paris, 1828, xviii, pp. 232–251, and 1829, xix, pp. 63 and 357.

became sporadic, but in the spring of 1829 the disease became again epidemic in Paris and its environs. It died out in the winter of that year. Alibert* called it *epidemic erythema*, regarding it mainly from the dermatological point of view. It is described as a dermatitis affecting particularly the palms of the hands and the soles of the feet, accompanied by formication, anæsthesia or hyperæsthesia, with stinging and smarting pains; the pain might extend over the whole body. Gastro-intestinal disorders were often present. The skin was at first bright red, then deeper tinted and brown, with subsequent pigmentation and desquamation, much cuticle occasionally being shed in one piece. Sometimes small papules, pustules and blisters formed. In some cases paresis, or even paralysis, of the lower extremities occurred. The disease tended to run a chronic course of several weeks, and in a few instances the same person was attacked more than once.

A little while ago, on looking up the subject of acrodynia, the idea occurred to me that it might be an epidemic of arsenical poisoning similar to the epidemic of arsenical poisoning which occurred in England during the years 1900 and 1901 amongst beer-drinkers.† The suggestion that it was a form of chronic ergotism has been generally rejected. Recently Prof. Karl Petren (Sweden) has written an article in the ‘*Revue Neurologique*,’‡ pointing out the great probability of the famous acrodynia epidemic having been due to arsenical poisoning. In recent years arsenical poisoning is known to have actually occurred in French wine districts, in connection with the use of arsenical preparations for destroying parasites by which vines often become infested.§ In the English epidemic among beer-drinkers it was subsequently proved that the beers thus contaminated had been brewed from glucose and invert sugar manufactured by a firm that, in its preparation, had used sulphuric acid largely contaminated with arsenic.|| It is rather

* Alibert, ‘*Monographie des dermatoses*,’ second edition, Paris, 1835, pp. 11–13.

† Cf. E. S. Reynolds, “Epidemic Outbreak of Arsenical Poisoning occurring in Beer-Drinkers,” ‘*Medico-Chirurgical Transactions*,’ London, 1901, lxxxiv, pp. 409–452; H. G. Brooke and Leslie Roberts, “The Action of Arsenic on the Skin as observed in the Recent Epidemic of Arsenical Beer Poisoning,” ‘*Brit. Journ. Derm.*,’ London, 1901, xiii, p. 121; F. H. Barendt, “The Skin Lesions due to the Presence of Arsenic in Beer,” *ibid.*, p. 148.

‡ Karl Petren, “L’Acrodynie: une intoxication arsenicale,” ‘*Revue Neurologique*,’ Paris, 1921, xxviii, pp. 812–814.

§ Cf. Paul Cazeneuve, “Sur plusieurs cas d’intoxication mortelle par l’arsenic dans les milieux viticoles,” ‘*Bull. Acad. de Méd.*,’ Paris, 1921, 3^e sér., lxxxv, pp. 660–671.

|| J. Dixon Mann, ‘*Forensic Medicine and Toxicology*,’ fifth edition, London, 1914, p. 488.

surprising that the occurrence of herpes zoster seems not to have been recorded in the great Paris epidemic of acrodynia; for, it should be remembered, in the English epidemic among beer-drinkers it was the occasional occurrence of herpes zoster in patients that first led E. S. Reynolds to suspect that arsenic was the cause of the symptoms.

Dr. W. Weston,* in connection with acrodynia, refers to a report by Dr. Henry Strachn, in 1888, on 510 cases of supposed "malarial multiple neuritis" observed in the Public Hospital of Kingston in Jamaica. I wonder whether the symptoms may have been really due to chronic arsenical poisoning in that epidemic.

ADDENDUM.

Dr. J. D. Rolleston and Mr. H. E. Powell have kindly drawn my attention to the case of a boy, aged 18 months, described by Dr. M. C. Field, in the 'Archives of Pediatrics' for February, 1922 (vol. xxxix, p. 116), as an example of "erythroedema," according to the descriptions of Swift, Wood and others in Australia. Dr. Field regards erythroedema as the same syndrome as that described by Weston, Byfield and others in America, under the heading of "acrodynia," or a syndrome "resembling pellagra or acrodynia."

DERMATO-POLYNEURITIS (ACRODYNIA: ERYTHROEDEMA).†

By HUGH THURSFIELD, M.D., F.R.C.P.,

in collaboration with

D. H. PATERSON, M.B., M.R.C.P.

At the beginning of February in the present year a girl baby, aged 10½ months, was sent to me at the Children's Hospital, Great Ormond Street, by Dr. Amsler, of Eton, for an opinion as to her condition. I found that she had a history of an obscure illness about six weeks previously, and was then wasted, with some albuminuria and marked desquamation of the hands and feet. I thought it most likely that she had had an attack of scarlet fever, and that this was the sequel. About a month later Dr. Mann, of Staines, who had charge of the child, asked me to see her again, since it had become clear that this

* W. Weston, *loc. cit.*, p. 519.

† The case was shown at the Section for the Study of Disease in Children of the Royal Society of Medicine on March the 24th, 1922.

diagnosis was incorrect. Since I had seen her she had had one or two exacerbations of the desquamation, had wasted rapidly, had become difficult to feed, and had become more and more obviously mentally affected; so that on this second occasion I recognised that I had made a mistake, and that I was confronted by a condition of which I had had no previous experience. I arranged to take the child into hospital in the hope that some of my colleagues would recognise the disorder. At my first visit to the hospital after the admission of the child an American visitor, Dr. Colby, of St. Paul, Minnesota, told me that Byfield, of the University of Iowa, had described a similar disease under the title of "Pellagra-Acrodynia." A reference to Byfield's paper showed that his description tallied almost in every particular with the condition of my patient. Since then Dr. Parkes Weber, who is a living encyclopædia of knowledge on the *littérature* of disease, has been good enough to put his knowledge at my disposal, and has referred me to papers by some of our Australian colleagues, who recognised and described what appears to be the same disease under the title of "Erythrœdema, or the Pink Disease," several years before the American observers. It is an open question whether some of the older clinical observations recorded under the name of "epidemic erythema" really relate to the same disorder.

The history of the present patient and the description of her disease are as follows: She had been breast-fed up to the age of 8 months, and until the age of 9 months she was a perfectly healthy child—indeed unusually advanced for her age. On the December 19th, 1921—that is, three months ago—she became ill, had some vomiting for three days and was feverish. After a few days' interval in which she seemed to be normal, from a bright, cheerful child she became fretful, whining and loath to take food. She remained much the same, though still wasting, till at the beginning of February desquamation of the hands and feet set in abruptly with much redness and swelling of the extremities, and a singularly offensive mouse-like odour which reminded me of the smell of favus. This was the condition in which I saw her first—thin, fretful and wasted, with the desquamation described, some albuminuria, and a history dating back some six weeks. She was not at that time obviously mentally affected.

During the next three weeks the severity of the skin-lesions waxed and waned, but the chief changes were the rapid alteration of the mental faculties, and the development of an extreme hypotonia of the muscles with a retention of the normal reflexes. It was stated by her mother that she moaned and screamed all day and night, that

she was tremulous, that her eyes rolled, and that three days before I saw her for the second time she had squinted.

On admission to the hospital the child's appearance was striking. Her face showed two patches of colour on the cheeks, and a reddened nose, with a patch of branny desquamation on the forehead. She had two small shallow ulcers on the dorsum of the tongue, but her mouth was otherwise clean. The fauces and tonsils were normal, and the teeth (sixteen) and gums were natural. She had no anæmia and no evidence of rickets. The hair was thinned over the scalp, especially over the right side of the head. She had a slight erythematous rash over the buttocks. Her mouth was often opened widely with a gape resembling that of a young nestling.

The extremities were cyanosed, slightly œdematous and cold, with the skin peeling off the fingers and toes in large flakes; the finger-nails were not affected, but the toe-nails appeared to be deformed by the inflammation. The redness, cyanosis and desquamation were limited to the hands and feet, and faded off rather gradually, but above the wrists and ankles the skin had an almost normal appearance. The offensive smell was still present, though less marked. The skin-lesions obviously caused her a good deal of irritation, but she did not rub or scratch so furiously as a child with eczema does.

With the exception of her neuro-muscular system her general condition was good. There was nothing abnormal in the heart, lungs or abdominal organs; the cervical glands alone were palpable, and those quite small; the joints and bones were normal. The urine contained a small amount of albumin, but no cells or casts. She swallowed well, and took food readily; her bowels were open normally. She had no fever, and her pulse-rate varied from 80–100.

As regards her neuro-muscular system, she had no paralysis, all movements could be performed, but the tonelessness of the muscles was striking: she could hold her head up and sit up with marked lordosis, but could raise herself with difficulty, and could not stand at all. All muscular movements were performed with extreme slowness, but there was no obvious tremor and no inco-ordination. When awake—and she slept very little even at night—she kept up a slow continuous movement, falling forward on to her face, and then slowly raising the head and bringing herself into a sitting position with a circular movement, repeating this series of movements frequently. The legs were moved but little, most of the movements being confined to the body and arms and head. When her attention was attracted she appeared to take an intelligent interest, but after a few moments an expression of pain showed on her face by a contraction of the

muscles and a low cry, with the wide gaping movement of the lower jaw.

The reflexes were all present and normal, except that on a few occasions the left plantar reflex was definitely extensor. Occasionally also she appeared to have spasmodic rigidity of the legs and arms, but this was momentary, and ordinarily the limbs were unusually hypotonic and lax. The electrical reactions were normal.

Sensation in a child so young and so abnormal is unusually difficult to test, but we formed the opinion that in the extremities from the elbow to the fingers and from the knee to the toes sensation to a pin-prick was markedly defective. On the body and face she appeared to feel normally, but when pricked in the ear for blood-count purposes she appeared not to feel it at all.

Her cerebro-spinal fluid was normal in every respect, and there was no change in the fundi of her eyes. Her blood-count was: Red cells 5,127,000, leucocytes 18,200, polymorpho-nuclear cells 58 per cent. = 10,500; no abnormal cells seen; hæmoglobin 90 per cent. There were no diphtheria bacilli in a swab taken from the naso-pharynx, and no abnormal organisms in the stools.

To summarise: A previously healthy child is suddenly attacked by an undiagnosed, probably febrile, infection. After some weeks of ailing, fretfulness and anorexia she develops marked skin, neuro-muscular and mental symptoms, resembling in many respects the condition seen in some cases of epidemic encephalitis. The condition is stationary or possibly slowly improving.

The disorder, or an affection very closely akin, was described by Dr. Swift, of Adelaide, in 1914, and has been more recently reviewed by Dr. Jeffreys Wood, of Melbourne, under the title of "Erythroedema, or the Pink Disease." The descriptions given by these writers leave no doubt in my mind that they are dealing with the disorder with which my patient is affected. Later in America several authors have written upon the disorder, notably Weston and Byfield. The paper of the last-named is, on the whole, the best account which I have seen. The writer, however, calls the disease by the cumbersome title of "Pellagra-Acrodynia." The name "acrodynia" appears to have been adopted in America, for several other cases have been recorded by this title. It is, I think, unfortunate, since it ignores what appears to me to be one of the principal features of the complaint, namely, the neuro-muscular and mental symptoms. I have ventured to style this case one of dermato-polyneuritis—a name which I am not prepared to defend at any length, but which appears to me to be more descriptive of the condition than "acrodynia." This last

seems to be better fitted to a case which Dr. Parkes Weber described last year as "A Condition somewhat resembling Lupus pernio." I cannot agree that this was an example of the same disease from which my patient is suffering, though I understand that Dr. Weber is of that opinion. [See previous paper in this issue by Dr. Weber, p. 17, —Ed.]

As to its causation, there is a disposition to regard it either as a "deficiency" disease or as a post-influenzal polyneuritis. In this connection it is interesting to record that ten days before the attack began in my patient her mother had an attack which was diagnosed as influenza.

In my patient I am not at present certain how far the brain is affected. The mental attitude is striking, and the apparent misery of the child corresponds exactly to Byfield's description; yet apart from the above-mentioned spasmodic rigidity, which now appears to have passed away, there is no evidence of involvement of the upper motor neuron, and the mental condition is no worse than one sometimes sees in other severe infections, *e.g.* in an acute pyelitis, occurring in so young a child.

The prognosis in Byfield's cases and in a more recent example recorded by Emerson is good; complete recovery appears to be the ultimate result. I hope that it may be so in the present instance.

P.S.—Since the above was written the patient has died of acute intussusception. Post-mortem examination failed to reveal any gross abnormality.

REFERENCES.

- BYFIELD.—'Amer. Journ. Child. Dis.,' 1920, xx, p. 347.
 EMERSON.—'Journ. Amer. Med. Assoc.,' 1921, lxxvii, p. 285.
 SWIFT.—Australasian Med. Cong., Child. Section, February, 1914 (quoted from Jeffreys Wood, *loc. cit.*).
 WEBER.—'Brit. Journ. Derm. and Syph.,' 1921, xxxiii, p. 228.
 WESTON.—'Arch. Pediat.,' 1920, xxxvii, p. 513.
 JEFFREYS WOOD.—'Med. Journ. Australia,' 1921, i, p. 145.

POSTSCRIPT BY DR. D. H. PATERSON.

I might add to Dr. Thursfield's paper the case recorded by Dr. Manning Field in the 'Archives of Pediatrics' of February of this year, under the title of "Erythroedema." In his case—a child, aged 18 months—the complaint was of restlessness, irritability and insomnia, diffuse redness and swelling of the hands and feet, which were always cold, constant low fever and diffused sweats, itching of the whole body, especially the hands and feet.

The feeding and previous history gave no information. In the

present illness, he says, two months ago a small papular eruption occurred on the hands, which was accompanied by itching, and followed by diffused redness and swelling. There was fever at this time with diffused sweating and a marked change in the disposition—restlessness, irritability and insomnia.

The swelling, redness and itchiness of the feet increased, and caused much scratching and rubbing. The child would assume a crouching position in bed, and burrow his head in the pillow. On admission the skin of the feet had a macerated appearance, and one loose nail was present. The red count was $5\frac{1}{2}$ millions, the hæmoglobin was 94 per cent., white cells 18,000, polymorphs 54 per cent. The blood-culture, urine, Wassermann and Pirquet reactions and stools were all negative; anorexia was marked. Temperature 98° to 104°F .

Field states that about 100 cases have been reported to date, and leans towards this being an infective sensory polyneuritis rather than a deficiency disease.

In the one case which was complicated by tuberculosis, and which proved fatal, reported by Byfield, the post-mortem examination showed involvement of an occasional anterior horn-cell of the spinal cord, gliosis about the central canal and œdema of the sensory roots.

ACUTE INTESTINAL OBSTRUCTION DUE TO INSPISSATED MECONIUM.

By E. E. HUGHES, Ch.M.Manch., F.R.C.S.Eng.,

*Visiting Surgeon, Manchester Children's Hospital; Honorary Surgeon,
Ancoats Hospital, Manchester.*

IN the 'Journal of the American Medical Association,' 1919, lxxiii, p. 1882, G. M. Ballowa and R. E. Brennan record a case of intestinal obstruction due to inspissated and impacted meconium, and they state that they could find no record in the literature of a similar case.

The following notes of an identical case which has come under my own notice show that the condition is not unique.

The patient, when first seen by me, was an apparently healthy male child, three days old. The history was that the child had been born at full term by normal labour, and that since birth it had passed no meconium and no fæces.

For the past 24 hours the child had vomited several times, the vomit consisting of milk and bile. On examination the child was well developed and showed no external congenital abnormalities. The abdomen was obviously distended, presented no rigidity, and was tympanitic on percussion. The anal orifice was normal, and the rectum, on digital examination, was found to be of normal calibre and quite devoid of even a trace of meconium. A diagnosis of acute intestinal obstruction, due, probably, to some congenital malformation of the large intestine, was made. Operative interference was deemed inadvisable and the child died a few hours later.

The post-mortem examination showed a large mass of inspissated meconium of solid consistence completely blocking the lumen of the transverse colon. Immediately proximal to the obstruction was a perforated stercoral ulcer $\frac{3}{4}$ in. in diameter, through which a quantity of liquid meconium and fæces had escaped into the peritoneal cavity, producing general peritonitis.

Other masses of inspissated meconium were found in the descending and pelvic colon.

There was no congenital malformation of any part of the intestinal tract.

Royal Society of Medicine.

SECTION FOR THE STUDY OF DISEASE IN CHILDREN.

Friday, October the 28th, 1921.

The President, Sir ROBERT JONES, K.B.E., in the Chair.

Case for Diagnosis.—Dr. J. PORTER PARKINSON showed a girl, aged 13 years, admitted into hospital with history that cheeks had been swollen for ten weeks; left side began first with discharge from the left ear, then right side began to swell, and finally parts beneath chin. She had headaches and hot sweats.

On admission there was considerable swelling of soft tissues of cheeks and below chin. Swellings hard and hot to touch. There were also similar swellings on backs of both arms. Enlarged glands could be felt in both axillæ and in supraclavicular regions. Slight discharge from left ear. Slight fever on admission, which abated in a few days. Heart, lungs, and abdominal organs were healthy. Hypodermic needle introduced into swelling on culture grew Gram-negative bacillus resembling Vincent's fusiform bacillus.

Swellings had become considerably reduced during past fortnight.

Splenomedullary Leukæmia.—Dr. E. BELLINGHAM SMITH showed a girl, aged 13 years, admitted to hospital May the 25th, 1921. Mother stated that in October, 1920, the child had a severe hæmorrhage following extraction of teeth. In December, 1920, had pain in left side; had become paler and thinner since that date.

On examination: Fairly well-developed girl, with old hare-lip and partial cleft palate; no marked anæmia. The heart and lungs normal, but heart displaced upwards, the apex-beat being outside the nipple in the fourth space. Several small shotty glands in neck, axillæ and groins. Spleen enormous, occupying whole of left side of abdomen, and extending downwards almost to pubis. Below umbilicus it extended $1\frac{1}{2}$ in. to right of mid-line. Liver did not appear enlarged. Blood-count showed: Red cells, 4,075,000; white cells, 652,000; hæmoglobin, 55 per cent. A differential count showed 88 per cent. myelocytes; polymorphs, 5 per cent.; lymphocytes, 5 per cent.; mast cells, 2 per cent.

On June the 11th, 1921, treatment commenced with collosol antimony, 1 dr. *bis die* by mouth in conjunction with X-ray applications to spleen and long bones once a week. On June the 22nd, 1921, collosol antimony given intramuscularly, beginning with $\frac{1}{2}$ c.c. twice weekly, to be steadily increased.

On June the 22nd, 1921, blood-count showed: 4,750,000 red cells; 593,000 white cells; hæmoglobin, 60 per cent. Differential count: Polymorphs, 36 per cent.; myelocytes, 51 per cent.; lymphocytes, 4 per cent.; mast cells, 5 per cent.; hyaline cells, 4 per cent.; normoblasts, 1 per cent.; nucleated red 0.5 per cent.

On August the 25th, 1921, white cells had fallen to 170,000.

Collosol antimony continued up to 10 c.c. twice weekly until September the 13th, 1921. On September the 21st, 1921, sent away for three weeks' convalescence. Blood-count on return (October the 14th, 1921): Red cells, 5,000,000; hæmoglobin, 70 per cent.; white cells, 160,000. Differential count: Polymorphs, 70 per cent.; myelocytes, 8 per cent.; transitional, 6 per cent.; lymphocytes, 10 per cent.; mast cells, 4 per cent.; eosinophils, 2 per cent.

The spleen was smaller, and child seemed well except that she had lost weight recently.

Syphilitic Infantilism with Splenomegaly.—Dr. E. BELLINGHAM SMITH also showed a girl, aged 17 years, who had come to hospital on September the 30th complaining of pain in left leg of one month's duration.

On examination: Patient appeared to resemble a child of 11 or 12 years. No development of breasts, axillary or pubic hair, and menses had never appeared. Head bossy, and upper incisors notched and peg-shaped. Palpation of abdomen revealed enormous spleen, occupying whole of left side of abdomen and extending downwards and forwards below umbilicus to right of the mid-line. Liver readily palpable two finger-breadths below the costal margin. At lower end of left femur was a large swelling, somewhat tender to touch and suggesting a syphilitic periostitis.

The family history showed that the mother had nine pregnancies, of which six children were alive; one was a stillbirth and two were miscarriages.

The Wassermann reaction in patient was positive.

The blood-count showed 4,880,000 red cells, some poikilocytosis and vacuolation. White cells, 3940; polymorphs, 72 per cent.; lymphocytes, 18 per cent.; mononuclears, 8 per cent.; hæmoglobin, 55 per cent.

X-ray photographs of left femur showed a well-marked periostitis.

Case of Œsophageal Stricture.—Dr. E. BELLINGHAM SMITH showed a boy, aged 4 years 10 months, who had been admitted to hospital in June, 1921, with history of persistent vomiting since 9 months of age. Patient was a full-time baby and weighed 9 lb. at birth. No previous illnesses or history of swallowing corrosives. He vomited all solid food immediately after administration, and frequently vomited liquids. Constipation severe.

On examination: Very wasted child, weight 15 lb. 9½ oz., height 33 in. There were no abnormal physical signs in lungs, chest or abdomen. For some days after admission he vomited all solids and semi-solids, which were returned unaltered almost immediately after ingestion.

X-ray photograph with barium showed obstruction to passage of meal about level of seventh dorsal vertebra, no Œsophageal pouch, but an obstruction, apparently a stricture, about an inch in length, just above cardiac orifice of stomach.

Mr. Lake had passed an Œsophagoscope, and reported that there was definite resistance to the passage of the Œsophagoscope about 2 in. above the cardiac orifice and just above the stricture a small shallow ulcer. Bougies 1 to 5 were passed, but a No. 6 could not be introduced.

After dilatation there was distinct improvement, and a fortnight later Mr. Lake succeeded in further dilating to No. 8. Since then progress had been uneventful, and the weight was now 18 lb. 14 oz.

The Wassermann reaction was negative.

Case of Recurrent Purpura with Joint Lesions and Fractures.—

Dr. ERIC PRITCHARD and Mr. B. WHITCHURCH HOWELL showed a boy, aged 9 years, whose history was as follows: Swelling of hands and elbows when aged 2 years; treated as rheumatism; legs affected later. At 6 years had mouth-bleeding. Family history negative. In 1919 treated for tubercle of right knee and left ankle. First seen by Mr. Howell in June, 1920, after attack of scarlet fever. Right knee: Slight limitation of movement, especially full extension, with thickened synovial membrane. Left foot in position of talipes equino-varus with periarticular thickening. Definite bruising of right leg, with petechiæ on abdominal wall with history of recent hæmoptysis. Admitted to medical ward. Diagnosis: Hæmophilia. Treated with hæmostatic serum, horse serum, with very marked local reaction; coagulation time 3 mins. 5 secs. December the 17th: Much hæmorrhage in buttock following injection of 25 c.c. of horse serum. December the 30th: Fell off chair and broke right femur and tibia. X ray: Subperiosteal fracture at lower third of femur; of tibia at upper third. Treated by extension on Thomas's splint. June the 23rd, 1921: Hæmorrhage into right elbow-joint. October the 6th: Right lower limb 1 in. longer than left; treated by ½ in. thickening on left sole and heel. October the 22nd: Readmitted with relapse in left ankle.

Specimen of Congenital Malformation of Œsophagus.—Mr. C. E. SHATTOCK.—The child was aged 10 days, had lost 2 lb. in weight since birth and regurgitated all food immediately after swallowing. The stomach and intestines were much distended with air. Autopsy: The patent lower end of the Œsophagus extended upwards from the cardiac orifice to open into the trachea about the bifurcation. The upper portion of the Œsophagus ended blindly about this level.

Duodenal Ulcer in Infancy.—Dr. DONALD PATERSON read a paper on this subject, the conclusions of which were as follows: (1) Duodenal ulcer is

a rare condition in infants, but more careful examination of the duodenum in marasmic infants may show it to be commoner than is at present admitted. (2) Ulcers may be present in *melæna neonatorum*. In older infants they may follow on any gastro-intestinal upset. (3) They may certainly complicate extensive septic burns or septicæmia. Tuberculosis is the common cause of duodenal ulcer in older children. (4) The diagnosis of duodenal ulcer is difficult and usually not made. (5) Duodenal ulcer may be successfully treated by operation.

Case of Renal Dwarfism.—Dr. DONALD PATERSON (*vide* BRITISH JOURNAL OF CHILDREN'S DISEASES, 1921, xviii, p. 186).

Friday, November the 25th, 1921.

The President, Sir ROBERT JONES, K.B.E., in the Chair.

Case of Dwarfism.—Dr. E. A. COCKAYNE showed a girl, aged 7 years 8 months. Parents healthy and of average stature. The girl was not small at birth and progress was normal until three years of age, when growth ceased suddenly. No growth took place for the next 3 years, although she was given thyroid extract $\frac{1}{2}$ gr. twice a day for the last 3 months of that period. At 6 years of age she was exactly the same height as her younger sister aged 3 years. One tablet of triglandin was then given 3 times a day, and she grew $\frac{1}{2}$ in. in the first 2 months and a further $\frac{3}{4}$ in. in the next 2 months. Growth entirely stopped for the next 4 months, but during the next month she grew another $\frac{1}{2}$ in., although she had had no drug treatment for 9 weeks. She was stationary again for 6 months, then grew $\frac{1}{4}$ in., and has been stationary again for the last 5 months. For the last 7 months she has had triglandin again. She was short and broad with rather a broad flat face, and had a deep voice. There was no mental defect. No evidence of myxœdema or achondroplasia. Sella turcica normal. Blood-pressure 70 systolic. No albuminuria. Wassermann negative in mother and child.

Case of Cardiospasm.—Dr. E. BELLINGHAM SMITH showed a male infant, aged 1 year 10 months. Full-time infant, breast-fed for two months, then on cow's milk and Nestlé's. At 5 months of age began to vomit. Had vomited brown fluid like chocolate. Could keep down fluids, but vomited all solid food. Family history: two other children alive, aged $8\frac{1}{2}$ and 10 years. Four miscarriages. Wassermann reaction in child negative. On examination, fairly well-developed child, but pallid with poor nutrition. Heart, lungs, abdomen revealed nothing abnormal. Since admission to hospital had vomited all solid food but would retain liquids and thickened feeds. His weight to-day, November the 25th, was 2 lb. less than on admission on August the 13th, 1921. Child seemed hungry and seized ravenously any bread and butter, but after two or three mouthfuls the bread and butter was returned unchanged.

The passage of soft œsophageal tubes had not revealed any obstruction, and a barium meal on two occasions had appeared to flow readily into the stomach.

Case of Gumma of the Liver and Scleroderma of Face.—Dr. E. BELLINGHAM SMITH showed a girl, aged 12 years. Admitted to hospital

for pain in the abdomen of one year's duration. On admission a very undersized child, 3 ft. 9 in. high, and weight 3 st. 4 lb. Complexion sallow, frontal bones bossed, facies expressionless; skin of forehead, nose and cheeks glistening and inelastic; no wrinkling took place on smiling or frowning. Nose was flattened and there was a bilateral discharge from the nostrils. On examination of the abdomen a large mass about the size of an orange presented itself in the epigastrium, and rather to the right of the mid-line. This tumour was situated in an enlarged liver, which reached almost to the umbilicus. The tumour was tense and elastic; between it and the right costal margin could be felt a smaller and harder mass in the liver substance. The blood-count showed no abnormal changes. The Wassermann reaction was positive. Three weeks' treatment with mercury and iodide had caused the large tumour to almost disappear, but the liver was still greatly enlarged and small masses can be felt. The sclerodermatous condition of the face was unaltered.

Case of Fracture at the Elbow-Joint.—Mr. B. WHITCHURCH HOWELL showed a boy, aged 9 years, who had fallen on his left hand on August the 4th, 1921, and sustained a fracture of the elbow-joint with a dislocation of the head of the radius. X rays showed: (1) Separated epiphysis of the lower end of the humerus, (2) fractured olecranon process, (3) fracture of the coronoid process. Treatment consisted in acute flexion by the "collar and cuff" method of Sir Robert Jones, in spite of the fracture of the olecranon process. Present condition, November the 11th, 1921: Full and painless flexion and supination. Extension incomplete by 30° (extension should be complete by January or February, 1922). Union of the olecranon.

Case of Morbilli Bullosi.—Miss E. MORTON (*vide* BRITISH JOURNAL OF CHILDREN'S DISEASES, 1921, xviii, p. 188).

Case of Persistent Jaundice.—Mr. G. A. LEVISEUR showed a case in a girl, aged 5 years 7 months, which was of interest owing to the long-continued jaundice (for nine weeks), the fluctuation of its intensity and the splenic enlargement.

Case of Juvenile General Paralysis.—Dr. BERNARD MYERS showed a girl, aged 11 years, who had complained of inability to walk properly for the last few months. The legs and arms were stiff, especially the left arm and leg; the knee-jerks were distinctly increased, especially the left. There was a right big toe extensor response and the supinator and triceps jerks were increased on both sides. The walk was spastic. As the upper incisors were notched and the frontal eminences well marked, the Wassermann reaction was carried out and found to be distinctly positive. Antisyphilitic treatment, however, had no effect but the patient became steadily worse. The memory was fairly good when she was first seen, but was now very deficient. She was unable to express herself freely and had a difficulty in pronouncing some words, a thickness and slurring of speech being apparent. Fine tremors of the tongue were noted and occasionally tremors of the lips. At the present time her mental condition was like that of a child of 3 to 4 years of age. She had lately lost control of the bladder and bowel. The pupils were moderately dilated and apparently fixed, with practically no reaction to light or accommodation.

CLINICAL SECTION.

December the 9th, 1921.

Case of Cirroid Aneurysm.—Mr. PHILIP TURNER showed a girl, aged 10 years, who had been admitted to hospital for a pulsating swelling under the left eye. It had first been noticed in July, 1921, when the lower eyelid also became dark and discoloured. There had been no pain, and she was not inconvenienced by the swelling. The only history of injury was that on November the 5th, 1920, she had been hit on the left cheek by a firework; this was apparently quite trivial, and only caused for the time some superficial redness of the skin. The left lower eyelid was now slightly swollen and discoloured, giving somewhat the appearance of an old "black eye." The swelling pulsated and a distinct thrill could be felt, most intensely at the infra-orbital foramen; there was also a loud systolic bruit. A tortuous dilated pulsating vessel could be distinctly felt, and there was excessive pulsation in the course of the angular and the transverse facial arteries. There was puffiness extending backwards to the left parotid region. No exophthalmos; conjunctiva of lower lid unaffected; pupils normal. Pressure on angular and transverse arteries did not stop pulsation, but pulsation, thrill and bruit immediately disappeared when the external carotid was compressed.

Postscript.—December the 11th: Common carotid ligatured, the immediate result being diminution of swelling and disappearance of pulsation, thrill and bruit. Later some pulsation returned, and about the tenth day after operation a slight thrill could be felt. On discharge from hospital the swelling was much less, discoloration had decreased and there was a slight degree of pulsation, but no thrill or bruit.

Société de Pédiatrie, Paris.*October the 18th, 1921.*

On the Schick Reaction.—MM. LESNÉ and BLAMOUTIER.—The attack of diphtheria is always severe in patients who have shown an intense Schick reaction, so that when a child who has previously had a strongly positive reaction develops diphtheria, large and repeated doses of antitoxin should be given. The Schick reaction shows that passive immunity usually disappears between the twenty-fifth and thirtieth day after injection of serum, and earlier (seventeenth to twentieth day) if any serum manifestations have occurred. The immunity does not last more than ten days after the second injection of serum. The bacilli found in the throat of convalescents who have been injected with serum do not become virulent before the thirtieth day. There is, therefore, a period of five to ten days during which the bacillus is still sensitised by antitoxin, although the patient has lost his immunity and probably during this period the carrier is not contagious. Twenty-eight per cent. of carriers examined twenty-five days after the first injection gave a positive Schick reaction, showing that they had lost their immunity, and 72 per cent. showed a negative reaction.

Changes in the Cerebro-spinal Fluid in Generalised Diphtheritic Paralysis.—M. G. L. HALLEZ and Mme. GÉNIN.—A large number of cases have been published showing the frequency of meningeal reactions in diphtheritic paralysis. The principal changes found in the cerebro-spinal fluid are, first, excess of albumin and sugar, and secondly, a cytological reaction characterised by a more or less marked lymphocytosis. A girl, aged 11 years, developed palatal palsy twelve days after an attack of diphtheria, and sixteen days later paralysis of accommodation and paresis of the lower limbs with loss of the reflexes. The cerebro-spinal fluid on lumbar puncture was constantly clear and under no hypertension. There was at first a slight lymphocytosis which subsequently completely disappeared. The amount of albumin did not exceed 60 cg. per litre and gradually returned to the normal (20–25 cg. per litre). On the other hand, the excess of sugar in the spinal fluid persisted for a long time, the amount varying from 2 g. to 1.25 g. per litre as compared with the normal 0.50 g. per litre. As Marfan showed in 1905, excess of sugar in the cerebro-spinal fluid is one of the most constant changes in the cerebro-spinal fluid in diphtheritic paralysis.

Symptoms of Pineal Disease cured by Injections of Pituitary Extract.—M. DESHAYES.—The patient was a boy, aged 10 years, in whom the symptoms of obesity, precocious sexual development and cerebellar gait suggested the presence of a tumour in the region of the pineal body. There was no evidence of syphilis and the Wassermann reaction was negative. In view, however, of the patient's obesity and polyuria, treatment by pituitary extract was instituted. No effect was obtained from ingestion, but after a month's course of subcutaneous injections the polyuria decreased, the gait improved and the weight diminished.

Treatment of Fracture of the Ulna with Dislocation of the Head of the Radius.—M. P. HALLOPEAU reported three cases in children aged 12, 10 and 8 years respectively, with fracture of the ulna in the upper third or quarter associated with dislocation of the head of the radius. Reduction of the fracture in each case was followed by reduction of the dislocation without any difficulty. All made a complete recovery.

Acute Endocarditis and Aneurysm of the Pulmonary Artery Grafted on Congenital Heart Disease.—M. G. BLECHMANN reported the case of a girl, aged 7 years, suffering from congenital heart disease, who died of pneumococcal septicæmia. The autopsy showed (1) interventricular perforation; (2) stenosis of the pulmonary artery of the infundibular type; (3) an inflammatory aneurysmal dilatation below the stenosis.

Frequency of Syphilis in Infants Suffering from Habitual Vomiting.—MM. A. B. MARFAN and H. LEMAIRE described a condition which was distinct from organic stenosis of the pylorus and did not appear to have any constant relation to any lesion of the stomach. It was found both in breast-fed and in artificially-fed infants. It usually appeared before the third month, sometimes in the first weeks or even the first days of life. It was characterised by vomiting, which recurred after each meal either at once or within an hour, and continued for weeks or months, but was liable to periods of exacerbation or relief. The possibility of congenital syphilis being the cause of this condition induced the speakers to make a careful examination of 57 children suffering from habitual vomiting. They found

that syphilis was certain in 19 cases, or 33 per cent., very probable in 13 cases, or 22·8 per cent., and probable in 7 cases, or 12·28 per cent., so that syphilis was certain or probable in 68 per cent. It was found that after the failure of the ordinary anti-emetic treatment, specific treatment, especially mercury by mouth in the form of 1 in 1000 solution of mercury lactate or mercurial inunction, produced a rapid improvement in 63 per cent. of the cases in which ordinary treatment had failed in ten days' time and a complete cure in about a month.

Congenital Scoliosis.—MM. MOUCHET and ROEDERER showed a case in a girl, aged 3 years, who presented a well-marked left dorsal scoliosis without cervico-lumbar compensation. There was no malformation of the upper or lower limbs, and with the exception of a rather large head the child otherwise appeared normal. No hemivertebra was found on palpation or X-ray examination. The prognosis of congenital scoliosis without bony malformation was very gloomy.

Treatment of Intolerance of Mother's Milk.—M. LAUZE reported the case of a breast-fed infant, aged 3 months, who had suffered from restlessness, insomnia and crying after its feeds since birth. There was great loss of weight. Acting on the recommendation of Weill (*vide* BRITISH JOURNAL OF CHILDREN'S DISEASES, 1919, xvi, p. 221), M. Lauze took 10 c.c. of the mother's milk and injected it with all antiseptic precautions into the infant's flank. The symptoms entirely disappeared as the result of a single injection, and the child put on weight.

Fatal Diphtheria in an Infant, aged 1 month, ten days after a Negative Schick Reaction.—MM. BLECHMANN and CHEVALLEY reported a fatal case of diphtheria with multiple lesions (external ear, nose and throat) in an infant, aged 1 month, who had ten days previously given a negative Schick reaction. The speakers pointed out that faucial diphtheria before the age of two months was very rare, as they had found only seven cases in the literature since 1902, including Rolleston's case (*vide* BRITISH JOURNAL OF CHILDREN'S DISEASES, 1910, vii, p. 74). The case also showed that one must not depend upon a passive immunity of maternal origin in young infants, but must rigorously carry out the ordinary prophylactic measures in crèches and nurseries whether Schick's reaction was performed or not.

November the 15th, 1921.

Chronic Meningitis with Muscular Atony.—M. R. LABBÉ and Mme. DE LARMINET showed an infant, aged 23 months, in whom the disease was characterised by three stages, the first consisting of meningo-encephalitic symptoms, the second of well-marked myatonia, and the third showing a slight attenuation of the myatonia with transient contractures.

Cure of Hemiplegia and Paraplegia of Uncertain Nature by Specific Treatment.—M. R. LABBÉ and Mme. DE LARMINET reported the cases of two girls, aged 6 and 9 years respectively, one of whom presented hemiplegia and the other paraplegia of subacute, apyrexial and progressive onset. There were no other symptoms of syphilis and the Wassermann reaction was negative in both, but both children showed

immediate and marked improvement on employment of specific treatment, consisting in mercurial inunction and injection of benzoate of mercury and sulfarsenol.

Congenital Icterus from Absence of the Bile-duct.—MM. P. NOBÉCOURT and H. JANET reported a case of congenital icterus which appeared two days after birth and persisted until death, which took place seven and a half months later. At the autopsy complete absence of the hepatic duct was found. The cystic duct was filiform and could be traced to the duodenum. The gall-bladder contained an almost colourless mucous fluid. The liver was hard, dark green in colour and slightly sclerotic. A remarkable feature in the case was the relatively long survival of the patient. As a rule life in such cases was not prolonged beyond a fortnight or three weeks; in rare cases the infant lives three or four months. Although syphilis was often responsible for the defect, there was no indication of it in the present case. Not only were clinical symptoms absent, but the Wassermann reaction was negative in the infant and both parents.

Cyst of the Kidney.—MM. A. MARTIN and J. RÉCAMIER reported a case of retroperitoneal cyst of the left kidney successfully removed from a boy, aged 14 years.

Generalised Osseous Dystrophy.—M. LANCE showed a girl, aged $8\frac{1}{2}$ years, who presented a generalised osseous dystrophy, consisting of deformities, periostoses and repeated fractures of both ulnæ with dislocation of the radii, repeated fractures of the left femur with subsequent elongation of the bone and arthritis of the left ankle-joint. The Wassermann reaction was negative in the child but positive in the mother.

Hodgkin's Disease.—MM. BARBIER, REBÉE and REILLY showed specimens from a case of Hodgkin's disease in a child, aged 7 years, and maintained that a diagnosis between Hodgkin's disease was impossible without a biopsy at the onset, and could only be made at an advanced stage.

Death during an Attack of Acetonæmic Vomiting.—M. H. DORLENCOURT stated that death during an attack of periodic vomiting was rare. Only about fifteen cases had been recorded in the literature, and of these a certain number had to be eliminated as death was due to a secondary complication. He reported the case of a boy, aged 3 years and 2 months, in whom the first attack had occurred at the age of $2\frac{1}{2}$ years, since when there had been a recurrence of vomiting every two months. In the last attack the typical picture of icterus gravis was present with the exception of jaundice. No autopsy could be obtained.

Vesical and Intestinal Bilharziosis in a Child Associated with other Intestinal Parasites.—MM. LEREBoullet and NADAL reported a case in a Mulatto boy, aged 9 years, who presented repeated scanty hæmaturia. The ova of *Schistosomum hæmatobium* predominated in the urine, while the ova of *Schistosomum Mansonii* were most numerous in the fæces. The stools also contained the ova of *Ankylostomum* or *Necator*. Treatment by intravenous injections of emetin produced an excellent result.

Radioscopic Appearances of the Normal Heart in the Child.—M. DUHEM stated that the radioscopic examination of the normal heart in

the child showed certain peculiarities which differentiated it from that of the adult. On the right side the projection of the right auricle was always more marked than in the adult, and the pulsation of the right ventricle was always distinctly visible. The outline of the left ventricle was, generally speaking, more vertical than in the adult, so that the heart in the child occupied a more median position than in the adult.

December the 20th, 1921.

Pyloric Stenosis in the Infant.—M. E. APERT showed specimens from a case aged 4 months which was of interest, first because the disease was relatively rare in France, this being the first example which M. Apert had seen, and secondly because the original diagnosis of pyloric stenosis was subsequently abandoned, but was confirmed at the autopsy.

Removal of a Safety-pin from the Œsophagus by Gastrotomy.—M. P. HALLOPEAU reported the case of an infant aged 4 months which had swallowed an open safety-pin. The ordinary methods for its removal were unsuccessful, as on X-ray examination its point was found to be fixed in the wall of the œsophagus. Deglutition was in no way affected, and the child had taken its feeds normally during the four days in which the pin was in the œsophagus. Gastrotomy was performed under very light chloroform anæsthesia, and the pin was removed by forceps. Subsequent recovery was uneventful.

Hæmatoma of the Submaxillary Region in Hæmophilia: Sudden Death from Œdema of the Glottis.—MM. LESNÉ, POWILEWIEZ and RÉCAMIER reported the case of a boy, aged 15 years, who had suffered from hæmophilia since the age of 19 months. One morning a hæmatoma suddenly developed in the submaxillary region, and death took place from œdema of the glottis due to compression.

Congenital Pseudarthrosis of both Clavicles and Cervical Ribs.—MM. MOUCHET and ERRARD showed a boy, aged 7 years, who presented a pseudarthrosis of both clavicles at the junction of the outer and middle third, thus constituting the first degree of the hereditary osseous dystrophy known as cleido-cranio-dysostosis. The patient did not show any cranial malformation in the parietal fossæ, fontanelles or facial bones. X rays showed the presence of two cervical ribs, one very marked on the left side and the other barely visible on the right.

Vertebral Anomaly and Cervical Rib.—MM. C. ROEDERER and AGENEUR showed a child who had been brought to them for a vicious attitude of the head resembling torticollis and cyphoscoliosis. X rays showed a double cervical rib fairly well calcified, which was a little more oblique than the first rib, and a coalescence of the sixth and seventh cervical vertebræ.

A Fatal Case of Accidental Vaccinia.—MM. GUINON and HALLÉ remarked that the danger of vaccination in children suffering from skin diseases, and especially eczema, was well known. The following case showed that vaccinia might be contracted accidentally and prove fatal without the eruption being generalised. The patient was a vigorous male infant, aged 1

year, whom a doctor had refused to vaccinate owing to the presence of eczema on the face and scalp, though he successfully vaccinated the twin sister who shared the same cot without warning the mother of the danger of contagion. When the patient was seen by Hallé, sixteen days after the vaccination of the other child, the whole of the face and scalp except the tip of the nose, upper lip and point of the chin was covered by confluent pustules almost all of the same size and age and resembling the lesions of vaccinia in the stage of suppuration. There were no lesions on the rest of the body. The general condition was very grave and death took place the next day. Nothing remarkable was found at the autopsy.

Inorganic Murmurs in Infancy.—M. G. BLECHMANN, who reported six cases in infants aged from 6 days to 3 years, came to the following conclusions: (1) Inorganic murmurs may occur in childhood and even in infancy. (2) They may simulate congenital heart disease (valvular lesions or abnormal communications). (3) Neither the systolic character of the murmur nor its propagation justifies a diagnosis of an organic lesion. (4) The study of the orthodiagram may be a valuable help, but further investigations of this kind are needed. (5) Time is the only diagnostic criterion. If the murmur becomes permanent it indicates an organic lesion, while if it disappears (sometimes not until the end of a year) it is inorganic.

Tumour of the Pineal Body.—MM. P. LEREBoullet and BRIZARD showed the specimens of a case of pineal tumour in a boy, aged 12 years, who had presented during life the complete clinical picture of pineal tumour, viz. sudden and abnormally rapid increase in height and in the development of hair and the genitals, signs of cranial hypertension and of localisation in the region of the corpora quadrigemina. Subsequently constant drowsiness developed and death took place in coma. At the autopsy the site of the pineal body was found to be occupied by a tumour the size of a hen's egg, which on microscopical examination proved to be a teratoid tumour of the neuro-epithelio-glioma type.

Abstracts from Current Literature.

Diseases of the Respiratory System.

Respiratory insufficiency in children (*Paris méd.*, 1921, II, p. 246). —Dumoutet states that a mild form of respiratory insufficiency in children may be due to two principal causes, viz. (1) Insufficiency of the lesser circulation; (2) insufficiency of the respiratory output, the first giving rise to acrocyanosis, and the second to a condition which he calls "hypasphyxia." In acrocyanosis the child is of normal size and weight, but the nose and cheeks are of a violet colour, the child is incapable of violent or rapid effort, the heart is liable to be irregular, but no signs of an organic cardiac lesion can be discovered. This condition, which is probably due to a pleuriglandular disturbance, must be distinguished from stenosis of the pulmonary artery, mitral insufficiency and stenosis, persistence of the ductus arteriosus, various malformations and pericardial adhesions, pulmonary tuberculosis and emphysema. In hypasphyxia the child is pale, cold, melancholy, readily

depressed by any effort, and has a low blood-pressure. Treatment of both conditions consists in respiratory gymnastics and properly regulated muscular exercise. Violent exercise of any kind must be forbidden.

J. D. ROLLESTON.

Asthma in infants (*'Presse méd.'* 1920, xxviii, p. 481).—**A. B. Marfan** disputes Landouzy's doctrine that asthma occurs only in tuberculous arthritic subjects, and maintains that asthma is independent of tuberculosis. In two asthmatic infants under his observation the cuti-reaction, performed three times at intervals of two months and three and a half months, was negative. Asthma therefore is not always a manifestation of tuberculosis. According to Marfan the relative frequency of asthma in infancy is not sufficiently recognised, because it is difficult to diagnose it from broncho-pneumonia or recurrent bronchitis. Of 222 cases of asthma observed by Percepid, 25 commenced during the first year of life, 118 between 1 and 10 years, and 79 between 10 and 20 years. Unlike asthma in adults and older children, in whom the attack of asthma develops suddenly without being preceded or accompanied by catarrh of the upper respiratory tract or bronchi, in the infant, and up to the age of 5 or 6 years, the asthmatic attack is almost always preceded and accompanied by coryza and bronchitis. The short duration of the attack, its rapid disappearance and its recurrence with the same characters enable one to differentiate it from bronchopneumonia and expiratory stridor due to tuberculous glands. The prognosis of asthma in infancy is favourable. The earlier the attack is in appearing the greater the chances of a permanent recovery. On the other hand, if the first attack occurs after the age of 15 years there is a risk of the affection lasting throughout life. Asthma in infants does not leave any sequelæ. Treatment consists in the prolonged use of potassium iodide.

J. D. ROLLESTON.

Bronchiectasis in the child (*'Gaz. des Hôp.'* 1921, xciv, p. 597).—**H. Jumon**.—This was first described by Laennec. It is much commoner than is usually supposed, especially the form due to syphilis. Predisposing causes are debility, rickets, chronic gastro-enteritis, and it may follow broncho-pneumonia, whooping-cough or measles. Pleural adhesion is a frequent accompaniment, though it does not cause bronchiectasis. Tuberculosis does not often cause it, but foreign bodies in the bronchi frequently do so. Most of the hereditary cases are the result of pulmonary syphilis and the treponema is found in abundance in the lung tissue. In the specific form the dilatations are isolated or grouped, in size from a pea to a nut with thin red walls sometimes fibrosed. The epithelium is more or less altered and the walls contain fibrous tissue and hypertrophied muscular fibres. In the non-congenital form affecting usually the base of the left lung there is chronic broncho-pneumonia, the lung is hard, violet-coloured and of an india-rubber texture, the dilatations are numerous, affecting the small and medium-sized bronchi. Sometimes there is one large cavity. The mediastinal glands are always enlarged and sclerosed and often tuberculous. The cause is an alteration in the walls of the bronchi with peribronchial inflammation and a destruction of the elastic and muscular tissue leading to a loss of toxicity of the walls. The symptoms follow an attack of subacute broncho-pneumonia, the cough persists, a slight fever remains, and these symptoms continue with occasional remissions. There is never hæmoptysis apart from tuberculosis. There may be mucoid or mucopurulent sputum, especially in the morning. Fætor is rare. The chief

signs are those of chronic bronchitis, but those of a cavity may be present; there is diminution of movement, of vocal fremitus and of breath- and voice-sounds with some impairment to percussion. The child may appear in fair health and not have any obvious dyspnoea. The prognosis is better than in the adult, and cure may result, but the child remains susceptible to tuberculosis or chronic bronchitis. The complications are foetid bronchitis, pleural effusion and pulmonary gangrene. Tuberculosis frequently supervenes. The heart is rarely dilated, but pulmonary osteoarthropathy is frequent. The diagnosis has to be made from chronic bronchitis, tuberculosis and interlobar pleurisy. The treatment is that of chronic bronchitis.

J. PORTER PARKINSON.

Pleural disease in infants and children (*New York Med. Journ.*, 1920, cxii, p. 124).—**H. Lowenburg** draws attention to the fact that the breath-sounds in young children are harsher and louder on the left side, and also that the breath-sounds are often not at all interfered with by fluid in the pleura. Percussion is the best sign, dullness and increased resistance over an area which is out of proportion to the amount of dyspnoea. No patient with empyema should be operated upon till the evidences of pneumonia have passed, the temperature has subsided and the pus become thick. The size of the opening is not so important as its position to give thorough drainage. Thoracotomy is to be preferred to costatectomy.

J. PORTER PARKINSON.

Acute pleuro-pulmonary congestions in children (*Journ. de Méd. de Paris*, 1921, xl, pp. 193 and 211).—**P. Nobécourt**.—The pleura and lung are so united that a pleurisy must affect the cortex of the lung, and *vice versa*. Acute pulmonary congestions are frequent in children; their sensitive vaso-motor system and the tendency to inflammatory reaction of the mediastinal glands predispose to it. They may be secondary to an acute specific fever or apparently primary, of which there are three varieties: (1) The congestive pneumonia of Potain; (2) spleno-pneumonia of Grancher; (3) acute pleuro-pulmonary congestion of Potain and others. Apart from the pneumonic form, their clinical syndromes are characterised by pleural signs without effusion. The serous membrane is oedematous and sometimes effusion may follow. Pleuro-pulmonary congestion has an onset less abrupt than pneumonia; there is shivering, pain in the side, dyspnoea and fever rising up to 103° F. or so in two to three days. One finds signs of congestion of one or both bases and slight dullness with no sense of resistance to the finger. Vesicular murmur is feeble with fine crepitant râles. Vocal fremitus is lessened. After some days the fever diminishes, and the temperature becomes normal and the physical signs clear up. If the fever persists signs of pleural effusion may appear; at first a small quantity only is present and this may be absorbed or may increase. This fluid is serous or sero-fibrinous and generally of pneumococcal or tuberculous origin.

J. PORTER PARKINSON.

Empyema in children (*Practitioner*, 1921, cvii, p. 238).—**F. C. Pybus**.—The pneumococcus was the causative agent in 40 out of 59 cases where the bacteriological examination was made, the streptococcus in 2 out of 59, the staphylococcus in 3, and the tubercle bacillus in 2. The mortality was 24 per cent. Bilateral empyema occurs after bronchopneumonia, and is frequently complicated by purulent pericarditis and meningitis. The most constant physical sign is dullness, and over this area

of dulness bronchial breathing and moist sounds may be heard—facts not generally recognised, which account for much late diagnosis. In chronic cases fever may be absent, the affected side contracted, and the heart pushed over towards the lesion. As the pleura gets thickened the breath-sounds are suppressed and the physical signs resemble those found in adults. Aspiration is only recommended in bilateral cases or when the patient is too ill to stand operation. The site of the operation is the seventh or eighth intercostal space in the mid-axillary line. Infiltration anæsthesia by novocaine is recommended; 1 to 1½ in. of rib should be removed. Discharge usually persists from four to six weeks. If the lung does not expand resection of more ribs or thoracoplasty is advised.

CHRISTOPHER ROLLESTON.

Method for diminishing mortality in empyema in infancy and childhood (*'Lancet,'* 1921, II, p. 1100).—**F. J. Poynton and F. N. Reynolds.**—Seventy-one cases are considered, 21 being under one year, and 50 between one and two years of age. Forty-five were males, 26 females. The death-rate in the first year was 76 per cent., in the second year 46 per cent. Twenty-one were pneumococcal in origin, 4 staphylococcal, 3 streptococcal, 3 tubercular, and in 1 no organism was found. In 26 there was a clear history of pneumonia, in 7 of broncho-pneumonia, in 7 of bronchitis, 6 were associated with measles, 1 with chickenpox, and 3 with whooping-cough. Cough, vomiting, dyspnoea and wasting in an infant point to empyema. Definite impairment of resonance or complete dulness was found in 66. In 46 breath-sounds were absent or diminished. In 18 there was tubular breathing, and in 23 the heart was displaced. In 12 cases the empyema was undetected or the child was moribund on admission. In 2 of these tuberculous meningitis and in 3 suppurative pericarditis were found. In 8 cases operated on by resection of ribs the cause of death was in 3 instances suppurative pericarditis, in 3 suppurative meningitis, in 1 lateral sinus thrombosis, and in 1 gangrene of the lung. Eleven died from immediate or delayed shock. To obviate this the authors devised an apparatus for continuous aspiration, consisting of a straight, round, silver cannula $\frac{5}{8}$ in. long provided with a shield through which tapes are threaded. This is inserted between the ribs by a short trocar; a rubber tube 10 in. long, closed at one end with a hole $\frac{1}{2}$ in. long involving half the diameter is introduced through the cannula into the chest cavity, and is connected by its other extremity with a White's suction pump. Continuous gentle aspiration is persisted with until pus has ceased to come from the chest for 48 hours, and physical signs, pulse-rate and temperature are satisfactory. The great advantage of this method is that the wound is healed within 15 days instead of 6 weeks required by the resection method. There is no secondary infection of the pleural cavity, and no osteomyelitis of the rib. No general anæsthetic and no daily dressings are required. The patient can assume any position desired without interfering with the efficacy of the drainage, which is continuous and complete. Expansion of the lung is assisted, as the suction produces a negative pressure of 8 mm. of Hg., which is more than that of the normal chest. As the removal of the pus is gradual the heart gradually resumes its normal position, and the danger of syncope is obviated. Occasional blockage of the tube by masses of fibrinous lymph may occur, but these can be washed away by injecting a few cubic centimetres of sterile salt solution. Four very successful cases are quoted in detail.

CHRISTOPHER ROLLESTON.

Influenza pneumonia complicated by empyema in an infant (*Med. Record*, 1920, xcvi, p. 62).—**A. Lobell** records a case of influenzal lobar pneumonia complicated by empyema in a male infant, aged 1 year. In spite of other complications, viz. double acute otitis, tonsillitis and ulcerative stomatitis, recovery took place.

J. D. ROLLESTON.

The mortality factors of lobar pneumonia in children (*New York State Journ. Med.*, 1920, xx, p. 348).—**Le Grand Kerr** says there is sufficient clinical support for the statement that the mortality factor in lobar pneumonia in children is not predominantly pulmonic, and is not usually cardiac. The toxic element of the disease which is so feared in adults and which is directly blamed for the cardiac failure is to be dreaded as much in children, but its action is very different. Leaving out of consideration this toxæmia, we still have two factors which contribute to it. We may at once dismiss acute exhaustion because the disease is self-limited, usually short in duration and with convalescence rapidly established. But the less acute type of exhaustion adds much to the gravity of the prognosis, because if the course of the disease is protracted to the tenth day or beyond many die apparently from the exhaustion alone. The other factor is an acute gastric dilatation, which requires prompt treatment by efficient lavage, withholding of everything by mouth for at least twelve hours, etc.

J. ALLAN.

Lobar pneumonia, with definite abdominal symptoms (*Med. Times*, 1920, xlviii, p. 140).—**J. Burnet** directs attention to the importance of remembering that children often complain of abdominal symptoms at the commencement of a pneumonia, and reports a case in a boy aged 13 years. When in doubt, it is always well to examine the chest before giving a definite diagnosis as to the nature of the case.

J. ALLAN.

Basal pneumonic residues in children (*Tubercle*, 1920, i, p. 547).—**W. Overend** describes the radiological appearances in children who present dulness on percussion, increased tactile fremitus, tubular breathing and increased whisper at the apex or base of one side, and perhaps crepitations at one base. Such cases show dilatation of the bronchi at the hilum, with basal opacities due to the unresolved pneumonia. Sutherland and Jubb examined the sputum of 230 such cases. Only 9 per cent. were positive. In sixty-nine negative cases the sputum was inoculated into guinea-pigs; only two were found tuberculous at the end of the month, whilst thirty died from pneumococcal peritonitis in from one to nineteen days. Bronchiectasis of the internal moiety of the lower lobe or of the whole lobe is more likely to follow attacks of chronic or indurative basal pneumonia. Disseminated patches of broncho-pneumonia are more liable to produce areas of diffuse bronchial dilatation.

CHRISTOPHER ROLLESTON.

The diagnosis of pneumonia in children (*New York Med. Journ.*, 1920, cxii, p. 1032).—**S. A. Blauner** says the temperature is not as sure a guide as in adults. Influenza may produce a similar fever ending in crisis without any lung trouble being present. Sometimes the breath-sounds are not tubular over a pneumonic patch; this is due to the consolidation not extending to the hilum of the lung or to a good-sized bronchus, for if the breath-sound enters the lung and becomes once vesicular, no consolidation will produce bronchial breathing. The percussion note is one of the most

important signs, but the lightest stroke is the best to elicit the dulness. *Râles* may sometimes be absent throughout the whole course of the pneumonia. In non-confluent broncho-pneumonia, apart from slight dulness, there may be no abnormal signs except those of bronchitis. Resolution in childhood is often a slow process taking three to seven days, and a certain dulness may remain to a later period. The chief sign of fluid is a flat note, and this may often be found along the spine, as the fluid may flow in that direction and so produce what the writer calls "the ribbon sign," namely, a dulness about the width of a piece of ribbon along the spine. Bronchial breathing should not be expected, for the fluid overlies the lung and the latter is too resilient to be much compressed.

J. PORTER PARKINSON.

Radiological observations in acute respiratory affections in children, especially pneumonia (*'La Pédiatrie,'* 1921, xxix, p. 19).—

C. L. Rusca states that radiological examination gives useful information in cases, not infrequent, where the onset of pneumonia is suspected, but physical signs are not yet sufficient to confirm the diagnosis. Lobar pneumonias are found by X rays much more commonly than symptoms would lead to suppose, while so-called "central pneumonias" are almost exceptional. Lobar pneumonia when developed gives a radiological picture which accords completely with percussion and auscultatory signs, while in early stages a shadow may often be detected when physical signs are deficient or even absent. X rays give a very definite picture of hepatisation, which is often not noticeable with the data furnished by percussion and auscultation, and is of some utility in conjunction with clinical signs in the differential diagnosis between lobar pneumonia and the caseous broncho-pneumonia *d'emblée* in young children. Broncho-pneumonia never gives the triangular shadow, but inconstant radiological pictures not corresponding to the clinical signs; nor is it possible by this means to differentiate between the various forms of broncho-pneumonia nor of its various stages, while the radiological differential diagnosis between acute broncho-pneumonia and tuberculous broncho-pneumonia is neither easy nor certain. Pleurisy with effusion gives the same radiological feature as in the adult, which has, moreover, great diagnostic importance in demonstrating small empyemas and interlobular sclerosis—sequelæ so frequent in acute affections of the respiratory system in children and often unrecognisable by the ordinary methods of investigation. X-ray examination sometimes possesses a preponderating value, as in determining the anatomical extension of an inflammatory focus, but can never supersede ordinary methods of diagnosis.

VINCENT DICKINSON.

Abscess of the lungs in infants and children (*'Amer. Journ. Dis. Child.,'* 1920, xix, p. 137).—H. Wessler and H. Schwarz record 15 cases of abscess of the lungs in children aged from 6 weeks to 8 years. Three of the cases followed aspiration of a foreign body, 5 tonsillectomy, and 7 pneumonia or other inflammatory lung conditions. The situation of the lesion varied with the ætiology. In post-operative abscesses and in the aspiration type of post-pneumonic abscess the disease is usually situated in the upper lobes. On the other hand, abscesses due to the aspiration of foreign bodies and the chronic broncho-pneumonic type of bronchiectasis are usually found in the lower lobes. In their experience of more than thirty post-operative cases in children and adults, the writers

found that in about one-third recovery took place spontaneously about two months after the onset. The prognosis is bad in the post-pneumonic cases, and in few of these is recovery spontaneous. In cases which persist beyond two months the question of operation should arise. J. D. ROLLESTON.

A case of diaphragmatic hernia ('*Brit. Med. Journ.*,' 1922, I, p. 90).—**G. J. Langley**.—A girl of 10 was brought to hospital complaining of cough and cold. On the left side an area of dulness was found, extending downwards from the fifth rib in the nipple line, the eighth space in the anterior axillary line, and the angle of scapula behind. Over this area vocal fremitus and resonance were absent and the breath-sounds diminished but present. Hippocratic succussion and the coin sound were sometimes obtained. The upper limit of dulness varied. There were no digestive symptoms. Radiologically a complete regular dome was found in the left side extending as high as the third rib and enclosing an air space, through which in the upper part lung tissue was seen. At the bottom of the air space was a horizontal line of fluid. No definite movements of the bow line were observed on respiration. On the right the diaphragmatic movements were normal. On giving a bismuth meal, the lower third of the oesophagus was dilated and the stomach filled in an irregular manner. In the lying-down position the bismuth passed up to the top of the bow line in the chest, displacing the air and completely filling the dome. The colon was normal. A diagnosis of true congenital diaphragmatic hernia was made. Four inches of the eighth rib were resected and the pleura opened. The stomach was found to be projecting well into the thorax. There was no diaphragmatic muscle, but only a thin transparent membrane consisting of pleura above and peritoneum below. To reduce the size of the diaphragmatic sac an elliptical strip of the thinned-out diaphragm was removed, and afterwards the dome of the diaphragm only reached to the seventh rib in the mid-axillary line. Recovery was uneventful. No muscle or nerve tissue was found in the portion of diaphragm removed. A radiological examination 4 weeks after the operations showed that the collapsed lung had completely expanded, and paradoxical movements of the diaphragm, the bow line in the chest ascending during inspiration and descending during expiration were demonstrated. Three months later a further examination showed that adhesions were being formed, and that the movements of the bow line were much restricted, but still reversed. The condition has to be diagnosed from congenital elevation of the diaphragm or eventration, but there are no certain grounds at present for differentiation between these two conditions. It is always wise to operate before strangulation or volvulus occurs. CHRISTOPHER ROLLESTON.

Diseases of the Circulatory System.

Congenital heart-block ('*Bull. Johns Hopkins Hosp.*,' 1920, xxxi, p. 351).—**E. P. Carter** and **J. Howland** record a case in a girl, aged 10 years, of congenital complete heart-block, of which there are only seven other examples in which the diagnosis has been confirmed by graphic records, including the case reported by Whipham (*vide BRITISH JOURNAL OF CHILDREN'S DISEASES*, 1915, xii, p. 321). A histological study does not appear to have been made in any of these cases. The remarkable features in the present case were the early diagnosis of the cardiac murmur at 9 months of age, an ascertainment of existence of congenital malformation of

the heart, the confirmation of the clinical diagnosis of heart-block by electro-cardiographic records at the age of 3, the history of having passed successfully through an attack of pertussis at the age of 5, and the child's normal appearance and behaviour at the age of 10.

J. D. ROLLESTON.

Congenital aortic stenosis (*'Bull. et mém. soc. méd. des hôp. de Paris,'* 1921, 3^e sér., XLV, p. 1152).—L. Queyrat and R. Monquin report a case of congenital aortic stenosis in a boy, aged 5 years, and associated with other malformations and arrests of development, viz. cryptorchidism, absence of the xiphoid cartilage, microdontism and other dental defects suggestive of hereditary syphilis. The serum reaction, however, was negative both in the child and in the father, who was suffering from congenital pyramidal cataract—a condition sometimes attributed to congenital syphilis manifested by a loud rough murmur, most intense in the second intercostal space to the right of the sternum, and a thrill along the innominate and left carotid, displacement of the apex and absence of cyanosis, deformity of the fingers and breathlessness.

J. D. ROLLESTON.

Diagnosis and prognosis of persistent ductus arteriosus (*'Zentralbl. f. inn. Med.,'* 1921, XLII, p. 105).—O. Budde states that the diagnosis of persistent ductus arteriosus may be established by the following considerations: (1) The history, which indicates congenital heart-disease. (2) Entire absence or later occurrence of cyanosis, which usually never reaches a very high grade. (3) Moderate enlargement of the heart. (4) Visible pulsation and palpable thrill in the region of the second left intercostal space. (5) Loud systolic and occasionally also diastolic murmur in the second left intercostal space, which is conducted into the vessels of the neck and interscapular space. There is also a greatly accentuated second pulmonary sound. (6) On very deep inspiration there is a diminution of the murmur and pulsation. The prognosis as regards life is not very unfavourable, as there is at least one case on record of the patient reaching the age of 58. As a general rule, however, a disturbance of compensation occurs as the result of strain or intercurrent disease or during puberty, and the symptoms are those of cardiac disease with loss of compensation. It should be noted that a pulmonary artery that is constantly under high pressure is very liable to sclerotic changes. Moreover endoarteritic processes, as Wagener, Rickards and others have shown, have a special tendency to develop in or around an open ductus arteriosus, which therefore forms a *locus minoris resistentiæ*. Rupture of the duct may also occur.

J. D. ROLLESTON.

Patent ductus arteriosus with involvement of the left heart (*'Deutsch. med. Woch.,'* 1921, XLVII, p. 559).—R. Gassul reports a case of patent ductus arteriosus in a boy, aged 15 years, with hypertrophy of the left ventricle. When the boy was seen three years later the condition was the same, the defect being well compensated and the patient able to follow his occupation in an office.

J. D. ROLLESTON.

Case of cyanosis with congenital stenosis of the pulmonary artery (*'La Pediatria,'* 1920, XXVIII, p. 905).—L. Moncalvi reports the case of a girl, aged 2 months, admitted into the clinic with cyanosis and frequent paroxysms of cough and dyspnoea. There was a diffuse and heaving cardiac impulse extending to both sides of the sternum, with a shrill and loud bruit at the base conducted to the sides and back. Later on, when

1 year and 9 months old, there was cyanosis of the face, extremities and mucous surfaces, distended veins in the head and neck, abdomen distended with spleen felt on the *right* side, and the liver enlarged two fingers' breadths below the *left* costal margin, clubbed fingers, thorax generally enlarged, with the cardiac apex in the sixth right intercostal space, a long systolic bruit taking the place of the first sound and the second sound accentuated. The bruit was loudest in the second right intercostal space, where the second sound was almost imperceptible. The Wassermann reaction was negative. The child was discharged in fair health when 5 years old, the cyanosis having considerably diminished, the murmur soft and short and localised to the pulmonary orifice, and the spleen and liver still large, while the clubbed fingers had disappeared.

VINCENT DICKINSON.

Cardiac developmental defect with return to normal (*Journ. Amer. Med. Assoc.*, 1920, LXXIV, p. 1229).—**S. McLean** records the case of a child born after 6½ months' pregnancy with cyanosis, clubbing of the fingers, and a loud systolic murmur over the whole chest. By the twenty-second month there was no murmur and the cyanosis had disappeared, and at the thirtieth month there was no clubbing of the fingers. A defect in the ventricular septum existing without any associated lesion would explain the symptoms and their subsequent disappearance.

J. D. ROLLESTON.

Pathogeny of congenital heart disease (*Arch. des mal. du cœur*, 1920, XIII, p. 534).—**C. Laubry** and **C. Pezzi** remark that all writers do not hold the same views as to the pathogeny of congenital heart disease, the two principal theories being the embryogenic theory and the inflammatory or infective theory. In favour of the embryogenic theory, which is the oldest, is the fact that congenital cardiac lesions are sometimes hereditary or familial, affecting several members of the same family and being transmitted from generation to generation either directly or indirectly. Moreover it is not infrequent to find in subjects of congenital heart disease other malformations, such as hare-lip, cleft palate, syndactyly, supplementary spleens, horse-shoe kidney or hypospadias. Vierordt estimates that these anomalies occur in 10 per cent. of cases of congenital heart disease. In most of those teratological manifestations no trace of infection or inflammation is to be found. Two congenital affections of the heart, however, may be the result of foetal endocarditis, viz. tricuspid stenosis and stenosis of the pulmonary artery. There is, however, a possibility that these lesions may be due to an endocarditis acquired very shortly after birth, but this variety is very difficult to distinguish from foetal endocarditis.

J. D. ROLLESTON.

The study of heart disease (*Brit. Med. Journ.*, 1920, II, p. 882).—**F. J. Poynton** emphasises the importance of infection. Malignant endocarditis which is antedated by rheumatism is infective in nature: 114 out of 172 cases of acute rheumatism occurring among children under 12 showed evidence of heart disease; 35 of these developed rheumatic nodules and 12 of these died; 16 became permanent cardiac invalids, and all but 2 had severe organic disease of the heart. Rheumatism in children may spare the valves and fall solely upon the myocardium, causing dilatation. Rheumatic heart disease is rare among the well-to-do. Careful inquiry

should be made into clothing and housing. Chorea is not caused by fright, as there was less of this disease in the years of the worst air-raids than in 1918, 1919 or 1920.

CHRISTOPHER ROLLESTON.

Auriculo-ventricular heart block in children (*Amer. Journ. Dis. Child.*, 1920, xix, p. 131).—J. A. E. Eyster and W. S. Middleton have collected twenty cases from literature of heart-block in children, nearly all of which were definitely or probably of congenital origin or occurred during the course of severe and usually fatal diphtheria. They also record a personal case of partial auriculo-ventricular dissociation which developed in a child aged 2 years, apparently in association with an acute nasal and throat infection in which the cultures showed *Staphylococcus pyogenes aureus*. The child, which was kept under observation for two years, developed normally, and was apparently in good health and normally active. The cardiac condition at the time of writing was that of a well-compensated mitral lesion associated with a 2 : 1 auriculo-ventricular block with a ventricular rate between 50 and 60.

J. D. ROLLESTON.

Microsphygmia and mitral stenosis (*Bull. et mém. soc. méd. des hôp. de Paris*, 1921, 3^e sér., xlv, p. 68).—G. Étienne and G. Richard report a case of microsphygmia, which has been found very frequently in idiots, in a girl, aged 15 years, in association with mitral stenosis and dwarfism. The microsphygmia disappeared after inhalation of amyl nitrite, and returned again rapidly after the effect of the drug had worn off. The writers think that the microsphygmia was due to functional predominance of the endocrine group which stimulates the sympathetic. The patient showed reaction to small doses of adrenalin and persistent symptoms of migraine, possibly of pituitary origin.

J. D. ROLLESTON.

Blood-pressure observations in functional bruits in children and young adults (*Brit. Med. Journ.*, 1922, i, p. 99).—A. F. Martin.—After the acute exanthems there is a rise in blood-pressure, with apical bruits and some cardiac dilatation. The systolic blood-pressure in healthy children is under 100 mm. Hg. up to the age of 11, 103 between 12 and 13, 106 between 13 and 14 years of age. The nitrites are very effective in reducing the blood-pressure in children, though useless in adults. Cases are quoted in which after the exhibition of nitrites for a few days the blood-pressure was decreased and the bruits disappeared. The rise in blood-pressure may be due to increased secretion of adrenalin and to exhaustion of the sympathetic nervous system which controls the endocrine system.

CHRISTOPHER ROLLESTON.

Modifications of the blood-pressure from the effect of adrenalin in sick children (*La Pediatria*, 1921, xxix, p. 542).—F. de Angelis injected 1 c.c. of a 1 in a 1000 solution subcutaneously, and took the blood-pressure at first every ten minutes and then every fifteen, until two successive observations gave the same result as that which existed previously to the injection. There was a rapid initial rise of pressure after the first ten minutes, reaching its maximum, in thirty minutes, then diminishing slowly in a period of 2½ to 3½ hours. The increase of pressure was seen in both the maximum and minimum tension, but more markedly in the former. The reaction was less intense and less durable in children affected with

cardiac affections or those which indirectly affected the cardio-vascular apparatus. The pulse was at first quickened, but almost immediately after it slowed down, while still maintaining a high systolic tension.

VINCENT DICKINSON.

Variations in the blood-pressure produced by injections of pituitrin in various infantile complaints (*La Pediatria*, 1921, xxix, p. 548).—**S. Fabris** injected subcutaneously 1 c.c. of pituitrin in fifteen children affected with latent tuberculous infection, nephritis, diabetes insipidus, scrofula, eczema, tracheo-bronchial adenopathy, cerebral tuberculoma, broncho-pneumonia, lymphatism, rickets, internal Leishmaniasis and mitral stenosis. Variations of pressure took place in all in ten to fifteen minutes after the injection. Patients of all ages and suffering from the same disease responded with an identical type of reaction. The alteration of pressure never exceeded 1 cm. Variations of the maximum and minimum pressure were usually parallel, except in cases of broncho-pneumonia, in which a diminution in the maximum corresponded to a slow and constant increase in the minimum. The duration of the action of the pituitrin was generally seventy-five minutes, after which pressure returned to normal. In the majority of cases the minimum returned before the maximum. In some cases the increase of pressure was preceded by a slight transitory fall, as in latent tuberculous infection, nephritis and diabetes insipidus; in others the increase was shown from the commencement. In others, again, there was a constant slow diminution of pressure from the onset, as in mitral stenosis, broncho-pneumonia, kala-azar and lymphatism.

VINCENT DICKINSON.

Pericarditis in childhood (*Brit. Med. Journ.*, 1921, II, p. 583).—**F. J. Poynton** emphasises the danger of pneumococcal pericarditis, especially as it attacks in 84 per cent. of cases children under the age of four, and is frequently complicated by pneumonia, pleurisy and empyema. The point of most importance in diagnosis is the gradual disappearance of the heart-sounds. It is important to map out the dulness carefully and to note the upward extension on both sides, especially the left. The left lung is compressed, as is evidenced by dulness over the left clavicle and tubular breathing below. On the right the præcordial dulness may reach the nipple line, and this line of dulness extends downwards and outwards, forming an obtuse angle with the hepatic dulness, while the dulness of a dilated right auricle forms an acute angle with the hepatic line. It is doubtful if it is possible to distinguish by radiography between a dilated heart and pericardial effusion. Owing to the fact that intense tubular breathing appears at the inferior angle of the left scapula, followed by dulness extending to the base, pleurisy or pneumonia is frequently diagnosed. Useful additional signs in arriving at a diagnosis are obliteration of the intercostal spaces, a wavy impulse, absence of diaphragmatic movement, and the almost imperceptible wave of the pulse. Tuberculous pericarditis is perplexing, the patient suffering at one time from pleurisy and at another from pericarditis. Ascites with hepatic and splenic enlargement ensues. For sero-fibrinous and purulent effusions surgical drainage rather than paracentesis is preferred. In paracentesis Marfan's route is recommended. The tip of the ensiform cartilage is defined, the needle inserted for three-quarters of an inch and then directed upwards and slightly backwards. In rheumatic pericarditis superficial crepitations are frequently heard immediately under the sternum and in

its neighbourhood, the result of a concurrent mediastinitis ending in pericardial adhesions. In such cases if a child has an aortic lesion angina develops. Sometimes œdema of the arm dependent on venous thrombosis develops, stripping the adhesions from the chest-wall. The Talma-Morrison operation has been attempted in a few cases with success.

CHRISTOPHER ROLLESTON.

Reviews.

PRÉCIS D'ALIMENTATION DES NOURRISSONS. Par E. TERRIEN. Fourth édition, 1921. Pp. 309. Price 12 fr. net.

PRÉCIS D'ALIMENTATION DES JEUNES ENFANTS. Par E. TERRIEN, Paris: Masson et Cie, 1922. Pp. 465. Price 14 fr. net.

WHILE the new and revised edition of Dr. Terrien's work on the feeding of infants follows the same general plan as before, the facts and theories discussed have been brought thoroughly up to date, and no important relevant points omitted. The volume, which is addressed to medical practitioners, is divided into two main sections dealing respectively with feeding in health and in disease. In the first and shorter section, after the familiar comparative table showing the percentage composition of human and other milk, are discussed *seriatim* the various points in relation to breast-feeding, mixed feeding and artificial feeding, their respective indications, advantages, difficulties and contra-indications. Among the contra-indications to breast-feeding the author, while acknowledging that quantitative modifications in the milk secreted seldom or never involve the exclusive adoption of artificial feeding, states that the quality of the breast milk may form an absolute contra-indication—temporary or permanent—to suckling. Other contra-indications mentioned include contagious diseases, tuberculosis, cardiac disease, especially if ill-compensated, and sometimes affections of the nervous system, both functional and organic. The section concludes with advice on the feeding of infants during the ninth month and directions for weaning.

The second and more important section deals with feeding in pathological conditions, these conditions being discussed under the three broad headings of (1) digestive disturbances, (2) nutritional abnormalities, including congenital debility, atrepsia, atrophy and hypotrophy, and (3) syphilis. There is an excellent chapter on the examination of the stools, and the evidence afforded thereby of pancreatic, hepatic and intestinal insufficiency. The volume concludes with a *résumé* of the various formulæ for estimating food requirements in relation both to age and weight, together with notes on dentition. A short but on the whole adequate index is provided.

The second volume, which is a new work, deals with the principles of the feeding of children from weaning to the age of ten years. As in the first volume, the author discusses in separate sections the questions of feeding in health and in various pathological conditions. The needs of the organism are entered into in some detail, with especial reference to height and weight, and caloric requirements. Nearly forty pages are then devoted to the theoretic feeding of the child, followed by fifty pages on the practical working out of

the theories. The second part, dealing with the regimen demanded in a large variety of pathological conditions, is no less full, and various forms of treatment, specific and symptomatic, receive an adequate share of attention. In neither section, however, can we find any reference to the work of Pirquet, although an unusually large number of authorities appear to have been consulted. The omission of such reference is particularly unfortunate in a work planned on the scale of the present one, and may well be repaired in the next edition of Dr. Terrien's book. A third section on some adjuvant forms of treatment, including fresh air, climatotherapy, heliotherapy, myotherapy, hydrotherapy, serum injections, etc., completes a volume which will be found useful to all pædiatrists. The absence of an index is regrettable, and detracts somewhat from the usefulness of the book as a work of reference.

E. M.

A SYNOPSIS OF MEDICINE. By HENRY LETHEBY TIDY, M.A., M.D., F.R.C.P., Assistant Physician to St. Thomas's Hospital, Physician to the Great Northern Central Hospital. Bristol: John Wright & Sons, 1922. Second edition, revised. Price 21s. net.

THE appearance of the second edition of this excellent manual barely eighteen months after the first (*vide* BRITISH JOURNAL OF CHILDREN'S DISEASES, 1920, xvii, p. 217) is an eloquent testimony of its well-merited success. The principal change in the present edition is in the section on encephalitis lethargica, which has been completely rewritten. J. D. R.

LESSONS ON TUBERCULOSIS AND CONSUMPTION. By CHARLES E. ATKINSON, M.D. Pp. 470. New York: Funk & Wagnalls, 1922. Price \$2.50 net.

BOOKS written for the general public on one or more aspects of disease are becoming increasingly numerous on both sides of the Atlantic. While Dr. Atkinson's new book differs little save in detail from its predecessors, there is probably a considerable section of the public who will study it with pleasure and benefit.

The volume consists of sixteen "Lessons," with such headings as "How Tuberculosis is Spread"; "How to Prevent Tuberculosis"; "How Tuberculosis may be Recognised"; "If the Chest had a Window"; "You and Your Physician"; "The Secret of Eating to Win"; "When the Blue Days Come"; "Special Methods of Treatment and Surgical Measures"; "Hints on Nursing." Dr. Atkinson writes in a popular style and with a commendable absence of technical terms. The teaching on the value of fresh air, rest, exercise and kindred topics is sound and up to date, but much of the advice given deals with points on which the doctor in charge of the case is alone competent to decide, and in such cases the minute details into which Dr. Atkinson enters are liable to defeat their own object—the promotion of whole-hearted co-operation of the patient with his physician. Furthermore, the wealth of detail given on every phase of the subject may possibly encourage a patient to undertake the management of his own case, this course apparently being contemplated by the author with equanimity. On p. 130 there is a paragraph on making your own diagnosis, which we regard as dangerous in the extreme. It is hardly possible to imagine circumstances in which a patient—at any rate of the classes by whom the book will be read—is out of reach of a medical practitioner whose advice

will not be at least far more valuable than the patient's own thoughtful reflections, even backed up by a careful reading of the appropriate lesson.

Apart from these criticisms the work is one that should prove useful to intelligent men and women suffering from tuberculosis, if for nothing else, for the tone of cheerful optimism running through its pages.

There are twenty illustrations, and the book is provided with an adequate index.
E. M.

A TEXT-BOOK OF GYNÆCOLOGY. By JAMES YOUNG, D.S.O., M.D., F.R.C.S.
Pp. 334. London: A. & C. Black, Ltd., 1921. Price 15s. net.

THIS volume, forming one of the Edinburgh Medical Series, is evidently intended rather for the senior student than for the medical practitioner, for although it contains a great deal of information in a small compass, more space is devoted to theoretical than to practical considerations, and the question of treatment is not very adequately discussed.

The nine sections of the book deal with anatomy and physiology, examination of the patient, symptoms of gynæcology, displacements of the uterus, infection of the genital canal, extra-uterine pregnancy, new growths, development and errors of development, and operative gynæcology (including minor gynæcological procedures). While all the sections are good, and most of them as full as it would be reasonable to expect in a book of this size, one of the best is that on the anatomy and physiology of the female genital organs, embodying the more recent teaching on menstruation and on the functions of the ovary. The section devoted to new growths of the genital tract is admirably arranged, and fully, though not of course exhaustively, treated. More attention might, we think, have been directed to the question of the neuroses in relation to pelvic disease, other points either omitted or inadequately dealt with being cutaneous lesions of the external genitalia, and diseases of the urinary tract, anus, and rectum, which are so intimately bound up with the more specifically gynæcological problems as to claim at least a passing mention in such a text-book as this.

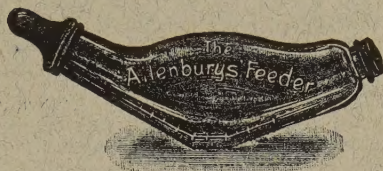
On the whole, however, the author has made a wise selection of material, and the teaching being throughout at the high level of excellence which might be expected from such an authority as Dr. Young, the volume is one which deserves a wide circulation.

The illustrations, numbering 183, are helpful, appreciably adding to the value of the book.
E. M.

The "Allenburys" Feeder

"We know of no better feeder. So simple, so easy to keep in order."

The Practitioner.



"Without the manifold defects of the old-fashioned tube-feeder. It is most easily cleansed."

Brit. Med. Journal.

ADVANTAGES:

A graduated bottle, easily cleaned, without corners or india-rubber tube for bacteria to breed in.

A pure rubber teat, which can be turned inside out for cleaning.

A valve air-inlet admitting air behind the column of milk.

PREVENTING SUCH BOTTLE DISORDERS AS

Wind Colic and Colic due to noxious germs, Thrush, etc.

Diarrhoea and digestive disorders caused by germ contamination.

ALLEN & HANBURY, Ltd., Plough Court, Lombard Street, **LONDON.**

The breast-fed Baby is the best-fed Baby

Glaxo

The Super-Milk

is a galactagogue of proven value

Glaxo is NOT a synthetic food in any way. It is pure milk, and nothing else—the product of New Zealand cows, free from bovine tuberculosis. Glaxo is unadulterated milk in its *safest* form.

Extract from the Annual Report upon Maternity and Child Welfare by the County Medical Officer for Monmouthshire, 1919:

"Many of the mothers have a good quantity of milk, but it is of poor quality. This is almost invariably remedied by the addition of Glaxo to the mother's diet, an addition which the majority of mothers declare improves their milk from the first day they take it."

GLAXO (Medical Dept.), OSNABURGH STREET, LONDON, N.W.1.

Proprietors: Joseph Nathan & Co., Limited, London and New Zealand.

Ideal for Children

Allenburys' EMULSION

Cod-Liver Oil & Hypophosphites

For delicate children Cod-Liver Oil is of great value. It provides an easily assimilable fat food for those who are especially prone to colds, and does much to keep up body temperature under severe winter conditions. In 'Allenburys' Emulsion only the purest oil is used. It is quite tasteless and comes from our own factories at Lofoten and Søndmør, Norway, at which Allen & Hanburys have been actual producers for over half a century.

Sound keeping qualities

ALLEN & HANBURYS LTD

Lombard Street, LONDON

West End House-7, VERE ST. W.1

